

# Ezi-MOTIONLINK<sup>®</sup>

Network Based Motion Controller Plug-In to Servo Drives

- Network Based Motion Controller
- Plug-In to Various Type of Servo Drives
- Various Motion Functions
- Simplification of the Wirings

## Plus-R



**FASTECH**

Fast, Accurate, Smooth Motion



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# **Ezi-MOTIONLINK<sup>®</sup> Plus-R**

**Network Based Motion Controller Plug-In to Servo Drives**



## 1 Network based Motion Controller

A maximum of 16 axis can be operated from a PC through RS-485 communications. All of the Motion conditions are set through the network and saved in Flash ROM as a parameter.

Motion Library(DLL) is provided for programming under Windows 2000/XP.



## 2 Plug-in to various Servo Drives

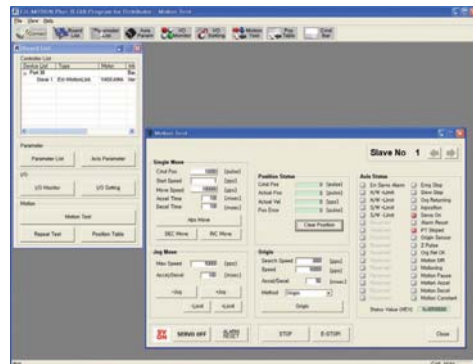
Ezi-MotionLink does not need wiring of drives because it is directly connected to User interface connector of Servo Drives. Available Servo Drives are Yaskawa, Mitsubishi, Panasonic, Sanyo-Denki, LS Mecapion, Higen and RS Automation Serco Drives.

\* Ezi-MotionLink product which is to support servo drive for LS Mecapion, Higen, RS Automation will be released



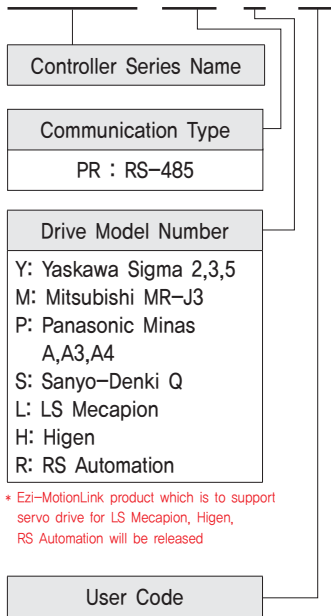
## 3 Various Motion Function

Symmetrical / asymmetrical trapezoidal acceleration, deceleration and various implementations of S-character motion is possible, and that the separate GUI (Graphic User Interface) and the like through a simple motion program TEST, parameter settings, I / O settings and conveniently run you can.



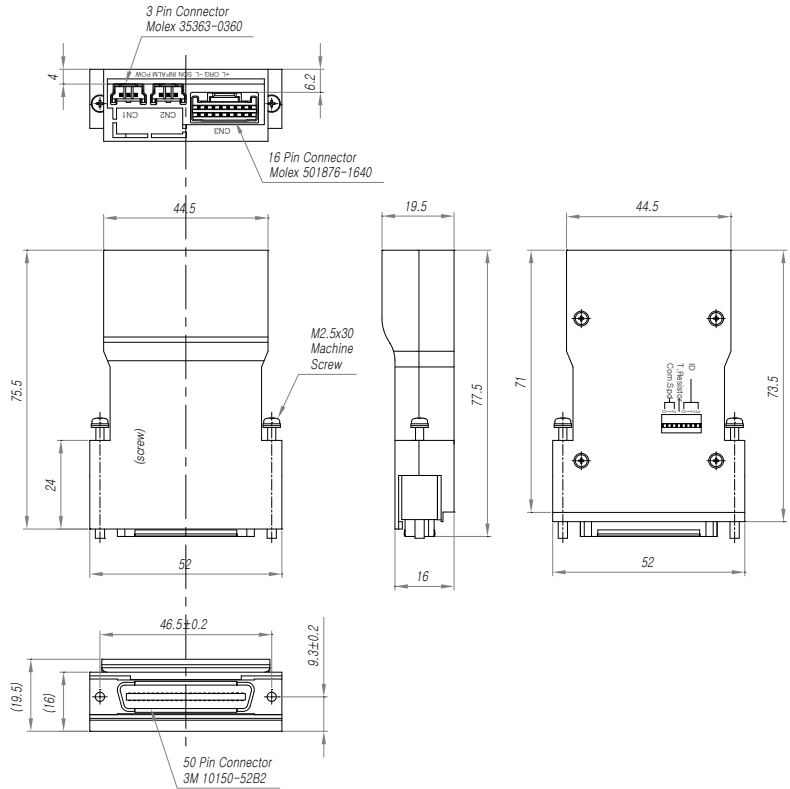
## ● Part Numbering

# Ez-ML-PR-Y-□



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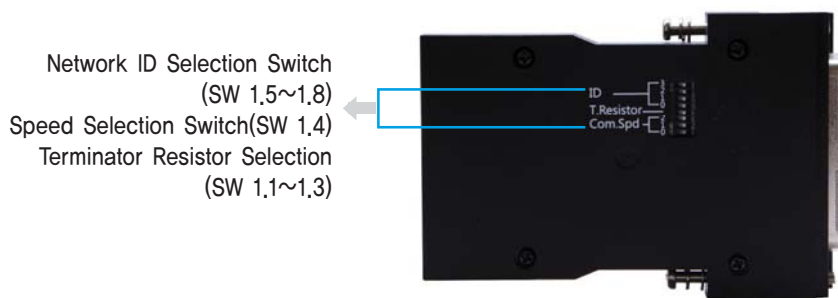
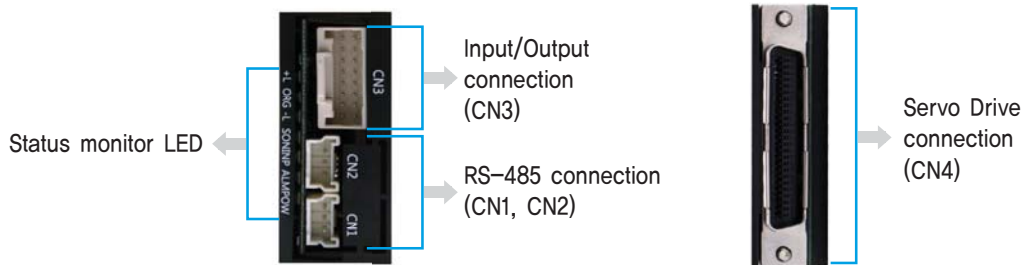
## ● Dimension (mm)



## ● Controller Specifications

Input Voltage	24VDC ±10%	
Data Range	-134,217,728 ~ +134,217,727 (28bit)	
Type of Acc/Dec	S- type Acc/Dec	
Pulse Input Method	2 pulse mode (CW/CCW) of 1 pulse mode (Pulse/Dir)	
Max. Output Frequency	5MHz	
Encoder Max. Input Frequency	4MHz	
Input Signal	3 dedicated input (LIMIT+, LIMIT-, ORIGIN), 7 programmable input (photocoupler)	
Output Signal	2 dedicated output (Compare Out), 1 programmable output (photocoupler)	
Position Table	64 motion command steps(Continuous, Wait, Loop, Jump and External start etc.)	
Rotational Direction	CW / CCW (Selectable by parameter)	
LED Display	Power status, Alarm status, In-Position status, Servo On status, ±limit Sensor status, Origin Sensor status	
Communication Interface	The RS-485 serial communication with PC Transmission speed : 9,600~921,600[bps]	
Multi Axes Drive	Maximum 16 axes through Daisy-Chain	
Return to Origin	Origin Sensor, Z phase, ±Limit Sensor	
GUI	User Interface Program within Windows	
Software	Motion Library (DLL) for windows 2000/XP	
Operating Condition	Ambient	In Use : 0~55°C In Storage : -20~70°C
	Humidity	In Use : 35~85% (Non-condensing) In Storage : 10~90% (Non-condensing)
	Vib. Resist.	0,5G

## ● Setting and Operating



### 1. Network ID Selection Switch (SW 1.5 ~ 1.8)

SW1.8	SW1.7	SW1.6	SW1.5	ID
OFF	OFF	OFF	OFF	0
OFF	OFF	OFF	ON	1
OFF	OFF	ON	OFF	2
OFF	OFF	ON	ON	3
OFF	ON	OFF	OFF	4
OFF	ON	OFF	ON	5
OFF	ON	ON	OFF	6
OFF	ON	ON	ON	7
ON	OFF	OFF	OFF	8
ON	OFF	OFF	ON	9
ON	OFF	ON	OFF	10
ON	OFF	ON	ON	11
ON	ON	OFF	OFF	12
ON	ON	OFF	ON	13
ON	ON	ON	OFF	14
ON	ON	ON	ON	15

### 2. Speed Selection Switch (SW 1.1 ~ 1.3)

SW1.3	SW1.2	SW1.1	Baud rate(bps)
OFF	OFF	OFF	9600
OFF	OFF	ON	19200
OFF	ON	OFF	38400
OFF	ON	ON	57600
ON	OFF	OFF	115200*1
ON	OFF	ON	230400
ON	ON	OFF	460800
ON	ON	ON	921600

\*1 : Default setting value

### 3. Terminator Resistor Selection (SW 1.4)

Use Terminator resistor under SW1.4 is ON,  
Do not use Terminator resistor under SW1.4 is OFF.

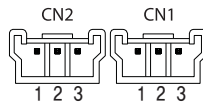
#### 4. Status Monitor LED

Indication	Color	Function	ON/OFF Condition
PWR	Green	Power input indication	LED is turned ON when power is applied
ALM	Red	Alarm indication	Flash when alarm occurs at Servo Drives
INP	Yellow	Complete positioning motion	Flash when position deviation is within In-Position value which set as parameter of Servo Drive after completion of position command pulse input.
SON	Orange	Servo On/Off indication	Servo On : Lights On, Servo Off : Lights Off
-L	Green	Indicate -Limit sensor detection	Flash when -Limit sensor is detected
ORG	Green	Indicate Origin sensor detection	Flash when Origin sensor is detected
+L	Green	Indicate +Limit sensor detection	Flash when +Limit sensor is detected

#### 5. RS-485 Communication Connector (CN1, CN2)

CN1, CN2 is common RS-485 communication connector.

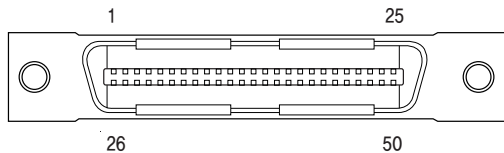
NO.	Function
1	Data+
2	Data-
3	GND



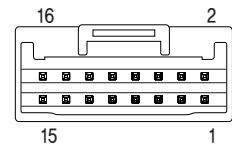
#### 7. Input/Output Signal(CN3)

NO.	Function	I/O
1	24VDC	Input
2	24VDC GND	Input
3	Frame Ground	
4	BRAKE	Output
5	+ Limit Sensor	Input
6	- Limit Sensor	Input
7	Origin Sensor	Input
8	Digital IN 1	Input
9	Digital IN 2	Input
10	Digital IN 3	Input
11	Digital IN 4	Input
12	Digital IN 5	Input
13	Compare Out	Output
14	Digital Out1	Output
15	Digital Out2	Output
16	Digital Out3	Output

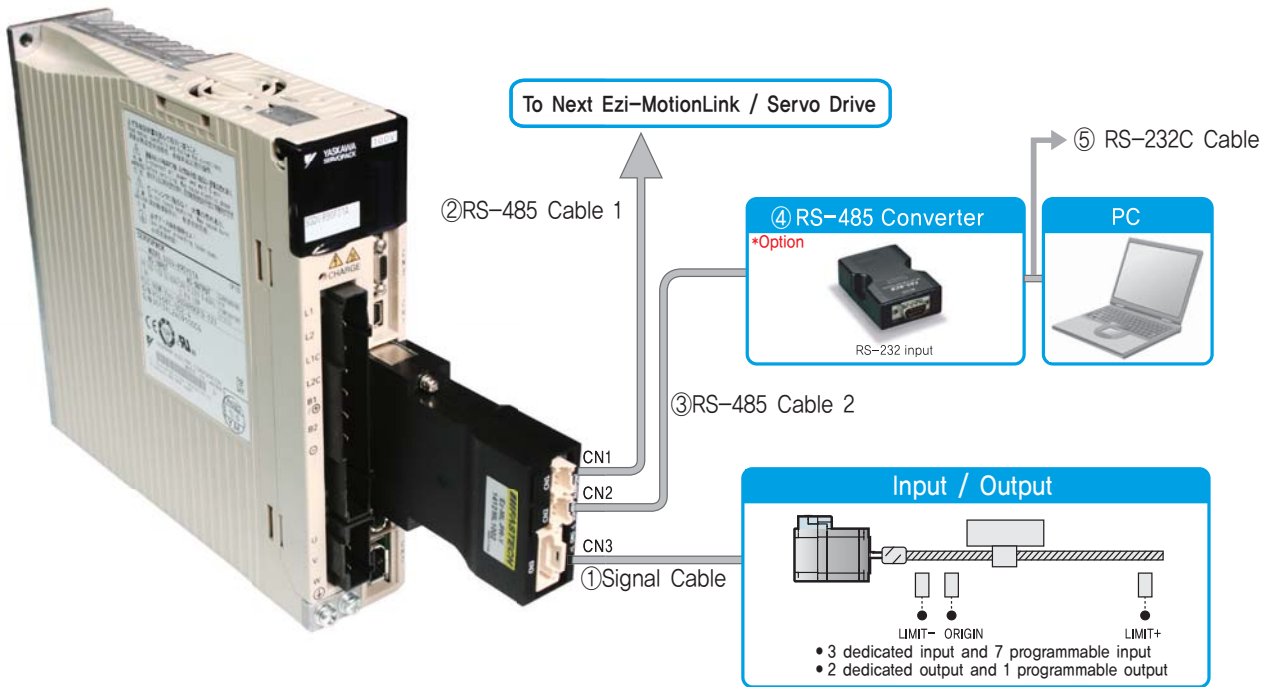
#### 6. Servo Drive Connector(CN4)



Pin Map of connector(CN4) which connects to Servo Drives is various according to type of Servo Drives. Please check Manual in detail. (It is plug-in to Servo Drives which are using normally so users do not have to concern.



# ● System Configuration



## 1. Cable Option

### ①Signal Cable

I/O connection cable for Ezi-MotionLink Plus-R, Origin Sensor and etc.

Item	Length[m]	Remark
CSVM-S-□□□F	□□□	Normal Cable
CSVM-S-□□□M	□□□	Robot Cable

□ is for Cable Length. The unit is 1m and Max. 20m length.

### ②RS-485 Cable 1

RS-485 Communication cable.

Item	Length[m]	Remark
CGNA-R-0R6F	0.5	Normal Cable
CGNA-R-001F	1	
CGNA-R-1R5F	1.5	
CGNA-R-002F	2	
CGNA-R-003F	3	
CGNA-R-005F	5	

\*Common cable to connect Ezi-SERVO ALL, Ezi-STEP ALL, Ezi-MotionLink Plus-R and Ezi-SERVO Plus-R MINI thru by Network.

## 2. Option

### ③RS-485 Cable 2

(FAS-RCR to Ezi-SERVO ALL, FAS-RCR to Ezi-STEP ALL, FAS-RCR to Ezi-SERVO PR MI, FAS-RCR to Ezi-MotionLink Plus-R)

Item	Length[m]	Remark
CGNB-R-0R6F	0,6	Normal Cable
CGNB-R-001F	1	
CGNB-R-1R5F	1,5	
CGNB-R-002F	2	
CGNB-R-003F	3	
CGNB-R-005F	5	

### ④FAS-RCR(RS232C to RS-485 Converter)

Item	Specification
Comm. Speed	Max, 115,2Kbps
Comm. Distance	RS-232C : Max, 15m RS-485 : Max, 1,2km
Connector Type	RS-232C : DB9 Female RS-485 : RJ-45
Operating System	Windows 98/2000/XP/Vista
Dimension	50X75X23mm
Weight	38g
Power	Powered from PC (Usable for external DC5~24V)

### ⑤RS-232C Cable

Item	Length[m]	Remark
CGNR-R-002F	2	Normal Cable
CGNR-R-003F	3	
CGNR-R-005F	5	

## 3. Connector for Cabling

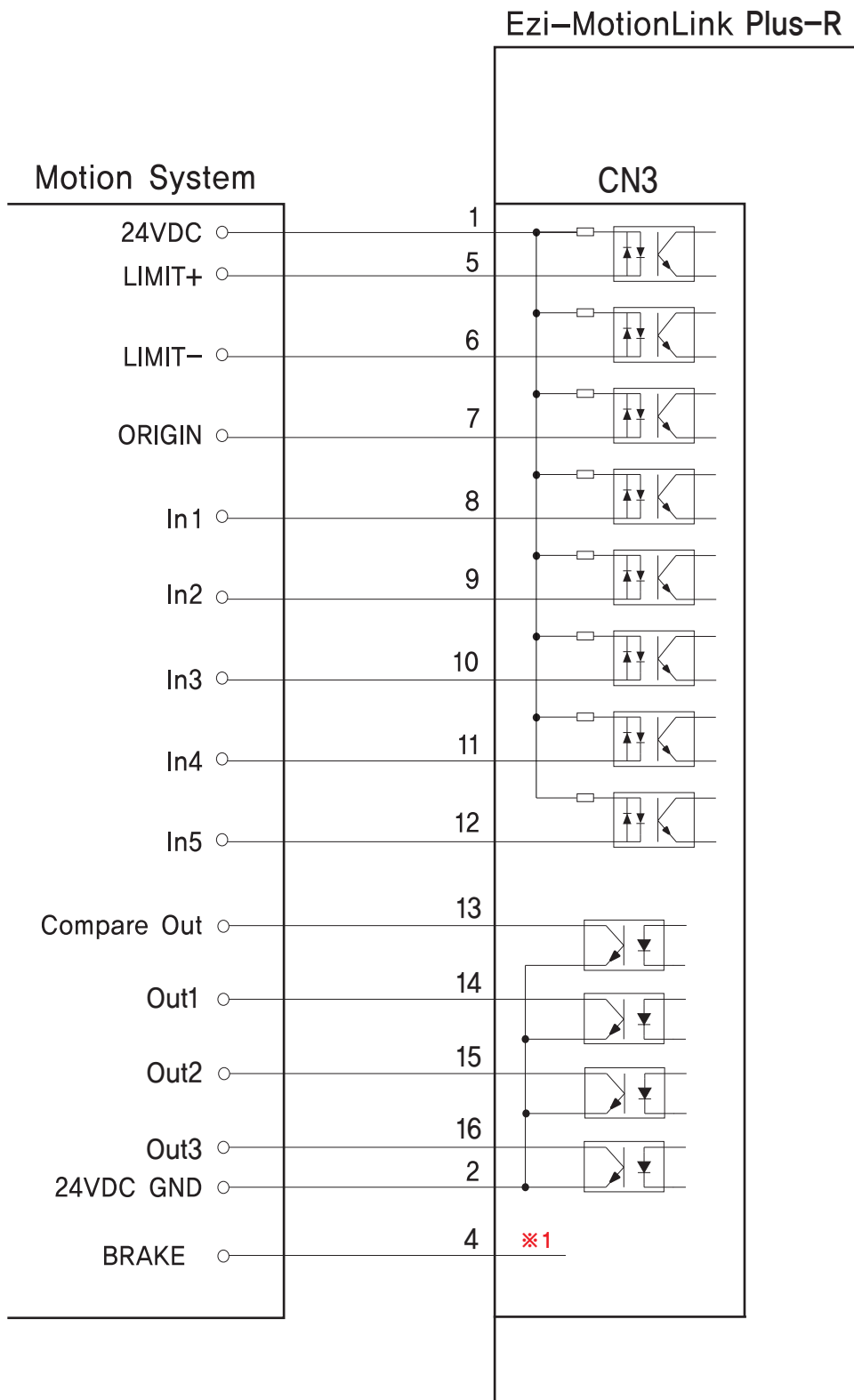
ITEM		Specification	Marker
Power/Signal Connector (CN3)	Housing	501646-1600	MOLEX
	Terminal	501648-1000(AWG 26~28)	MOLEX
RS-485 Connector (CN1,CN2)	Housing	33507-0300	MOLEX
	Terminal	50212-8100	MOLEX

※These connectors are serviced together with Ezi-MotionLink Plus-R except when purchasing option cables.

※Above connector is the most suitable product for Ezi-MotionLink Plus-R. Another equivalent connector can be used.

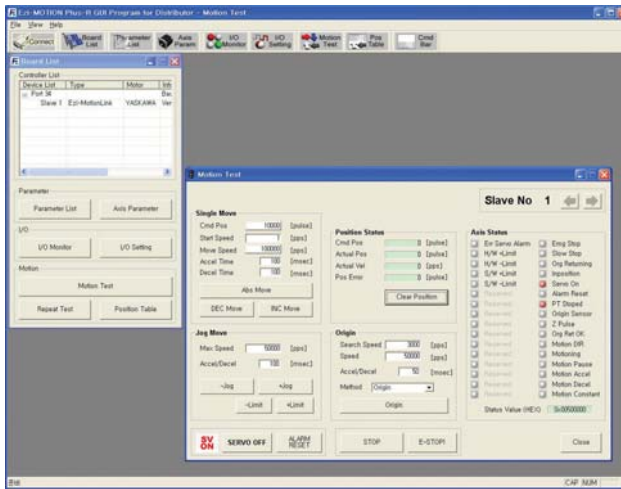


## ● External Wiring Diagram



※1 brake terminals of the brake servo drives  
 Is an extension of the signal as it is,  
 Therefore Connecting to and using the  
 brake servo is in use See the description  
 of the drive.

# GUI(Graphic User Interface) Screenshot



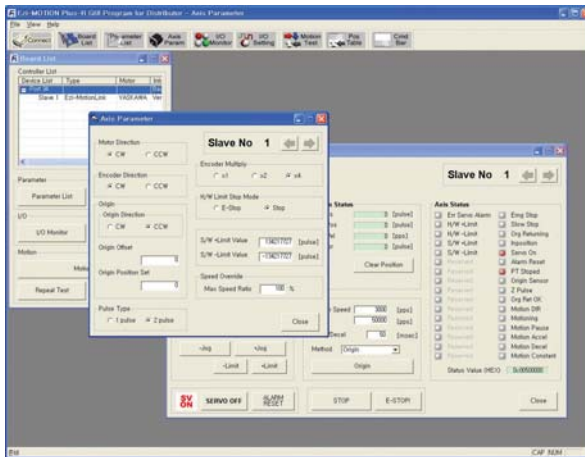
## ◆Controller Lists and Motion Test

This screen display the controller list that connected to system, You can make a single move, jog and origin command and also the motor status is displayed.



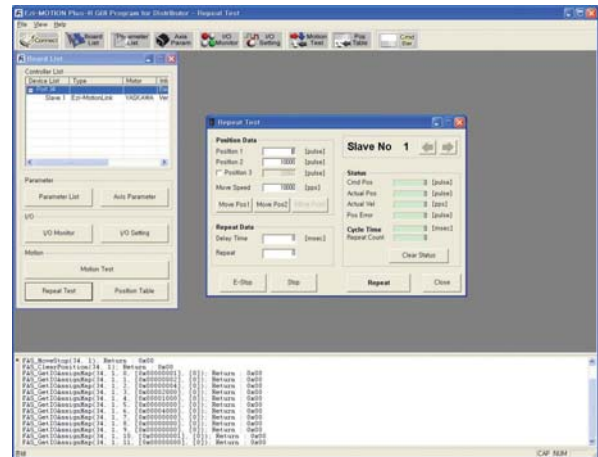
## ◆Parameter List

All of the parameters are displayed and modified on this screen.



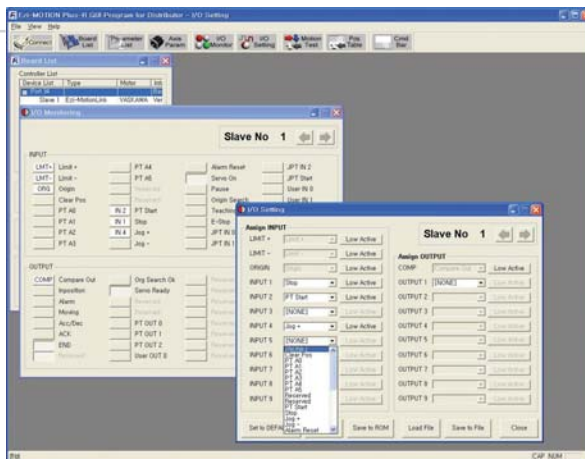
## ◆Axis Parameter Setup

You can select various parameters that frequently used, (ex : sensor input logic)



## ◆Motion Repeat and Monitor Status

Target position, speed, delay time and repeat count are selected for repeat motion test, Motion library(DLL) is also displayed on screen.



## ◆I/O Monitoring and Setting

You can select various digital input and output signals of controller,

MEMO



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