

Ezi-MOTIONLINK[®]

Network based Motion Controller Plug-in to Servo Drives

- RS-485 Based Motion Controller
- Compatible with Various Servo Drives
- Various Motion Functions
- Reduced Wiring

Plus-R



CE

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Fast, Accurate, Smooth Motion



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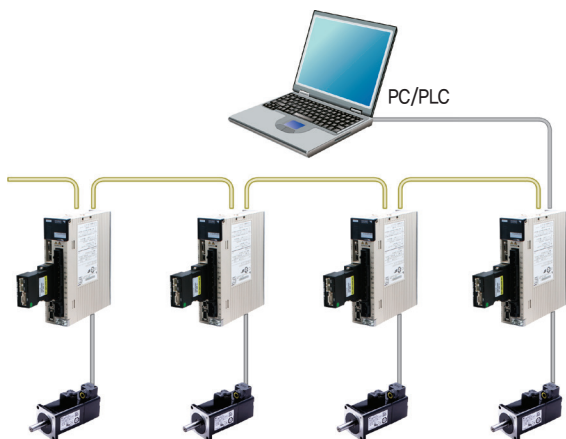
Ezi-MOTIONLINK[®] Plus-R

Network based Motion Controller Plug-in to Servo Drives



1 RS-485 Based Motion Control

A maximum of 16 axis can be operated from a PC through RS-485 communications. Also, motions are controlled by RS-485, and all of the Motion conditions are set through the network and saved in Flash ROM as a parameter. Motion Library(API) is provided for programming under Windows 7/8/10.



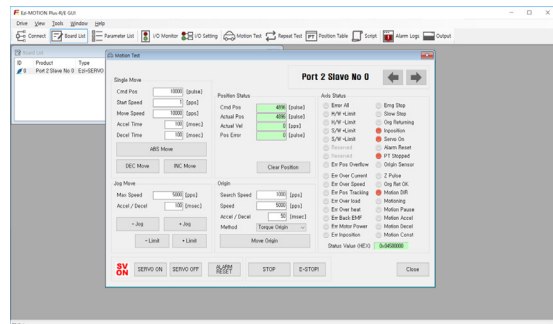
2 Flexible System Construction

Ezi-MOTIONLINK Plus-R can be directly connected to the servo drive through the attached connector, so you can easily install the product without additional wiring. In addition, since it is compatible with servo drives of various companies, the system can be built flexibly.

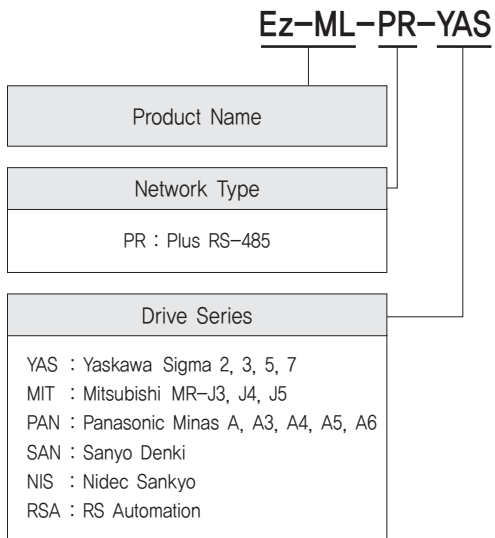


3 Various Motion Function

Ezi-MOTIONLINK Plus-R has various functions required for motion control system, and you can set up motions simply and conveniently by using the provided GUI (Graphical User Interface) software.



● Ezi-MOTIONLINK Plus-R Part Numbering

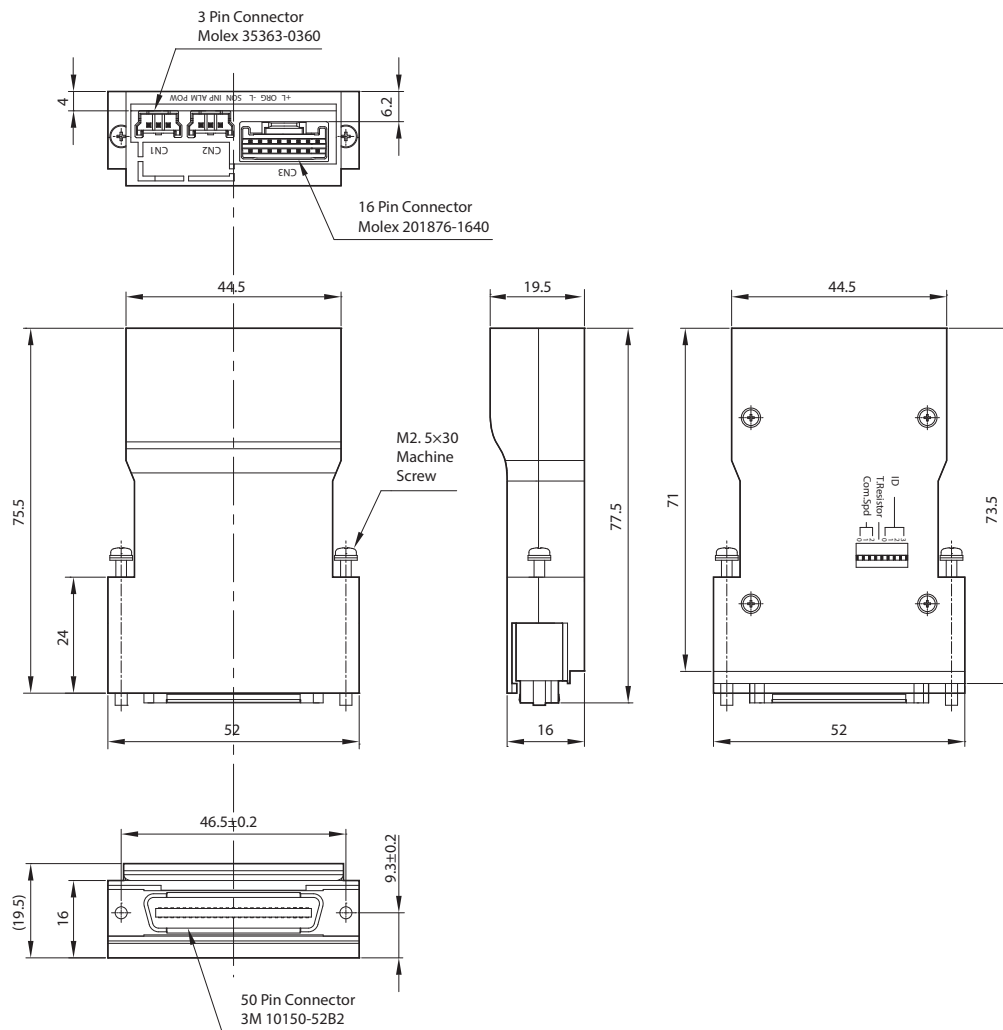


※ The products for LS Mecapion and Higen would be released soon.

● Part Number

Part Number
Ez-ML-PR-YAS
Ez-ML-PR-MIT
Ez-ML-PR-PAN
Ez-ML-PR-SAN
Ez-ML-PR-NIS
Ez-ML-PR-RSA

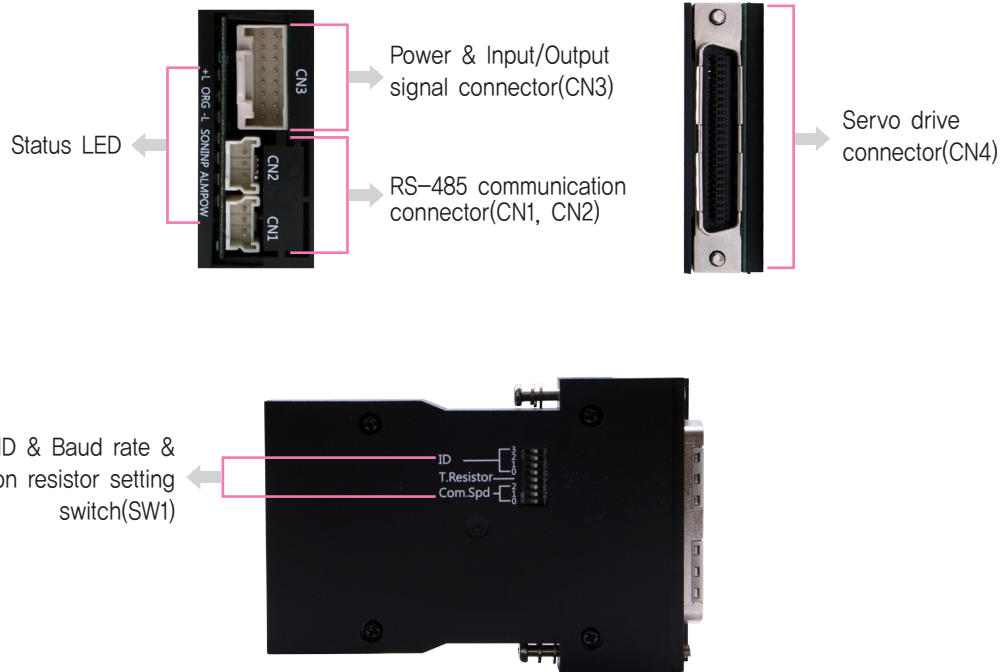
● Dimensions of Controller [mm]



● Specifications of Controller

Input Voltage		DC24V±10%
Multi Axis Drive		Max, 16 axis operating (Daisy Chain)
Current Consumption		Max, 500mA
Operating Condition	Ambient Temperature	· In Use: 0~55°C · In Storage: -20~70°C
	Humidity	· In Use: 35~85% RH (Non-Condensing) · In Storage: 10~90% RH (Non-Condensing)
	Vib. Resist.	0.5g
Function	LED Display	Power Status, In-Position Status, Servo ON Status, Alarm Status, ±Limit Sensor & Origin Sensor Status
	Rotational Direction	CW/CCW (Set by parameter)
	Data Range	-134,217,728 ~ +134,217,727 [pulse] (28bit)
	ACC/DEC Process	Symmetric / Asymmetric trapezoidal acceleration & deceleration
	Command Pulse Output Method	2 pulse mode (CW/CCW) or 1 pulse mode (Pulse/Dir) (Set by parameter)
	Max. Output Frequency	5MHz
	Encoder Max. Input Frequency	4MHz
I/O Signal	Input Signals	3 dedicated inputs (LIMIT+, LIMIT-, ORIGIN), 5 programmable inputs (Photocoupler Input)
	Output Signals	1 dedicated output (Compare Out), 3 programmable outputs (Photocoupler Output), 1 Brake output
Communication Interface		· RS-485 Communication · Baud Rate : 9,600~921,600bps
Position Control		· Incremental mode / Absolute mode Data Range: -134,217,728 to +134,217,727 [pulse]
Return to Origin		Origin Sensor, Z phase, ±Limit sensor
GUI		User Interface Program within Windows
Library		Motion Library (API) for windows 7/8/10

● Settings and Operation



1. Status LED

Name	Color	Function	Description
POW	Green	Power Input Indication	LED is turned ON when power is applied.
ALM	Red	Alarm Indication	LED blinks when an error occurs from the servo drive.
INP	Yellow	Positioning Completion Indication	LED is turned ON when position error reaches within the preset value of the servo drive after the positioning is complete.
SON	Orange	SERVO On/Off Indication	Servo ON: Lights ON, Servo OFF: Lights OFF
-L	Green	Negative Limit Detection Indication	LED is turned ON when a signal from the negative limit sensor is detected.
ORG	Green	Origin Detection Indication	LED is turned ON when a signal from the origin sensor is detected.
+L	Green	Positive Limit Detection Indication	LED is turned ON when a signal from the positive limit sensor is detected.

2. Network ID Setting Switch(SW1.5~SW1.8)

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

3. Baud Rate Setting Switch(SW1.1~SW1.3)

SW1.1	SW1.2	SW1.3	Baud Rate [bps]
OFF	OFF	OFF	9,600
ON	OFF	OFF	19,200
OFF	ON	OFF	38,400
ON	ON	OFF	57,600
OFF	OFF	ON	115,200*
ON	OFF	ON	230,400
OFF	ON	ON	460,800
ON	ON	ON	921,600

*1 : Default Value

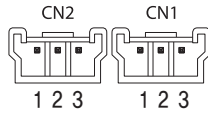
4. Termination Resistor Setting Switch(SW1.4)

When using multiple controllers, set a termination resistor for the controller installed at the end of the network for stable operation.

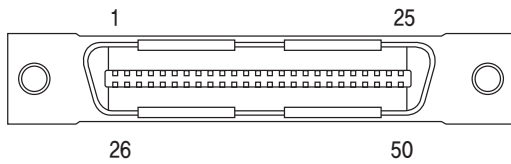
- SW2.1 ON: Termination resistor is set
- SW2.1 OFF: Termination resistor is not set

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

No.	Function
1	Data+
2	Data-
3	GND



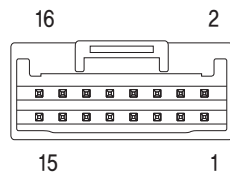
6. Servo Drive Connector(CN4)



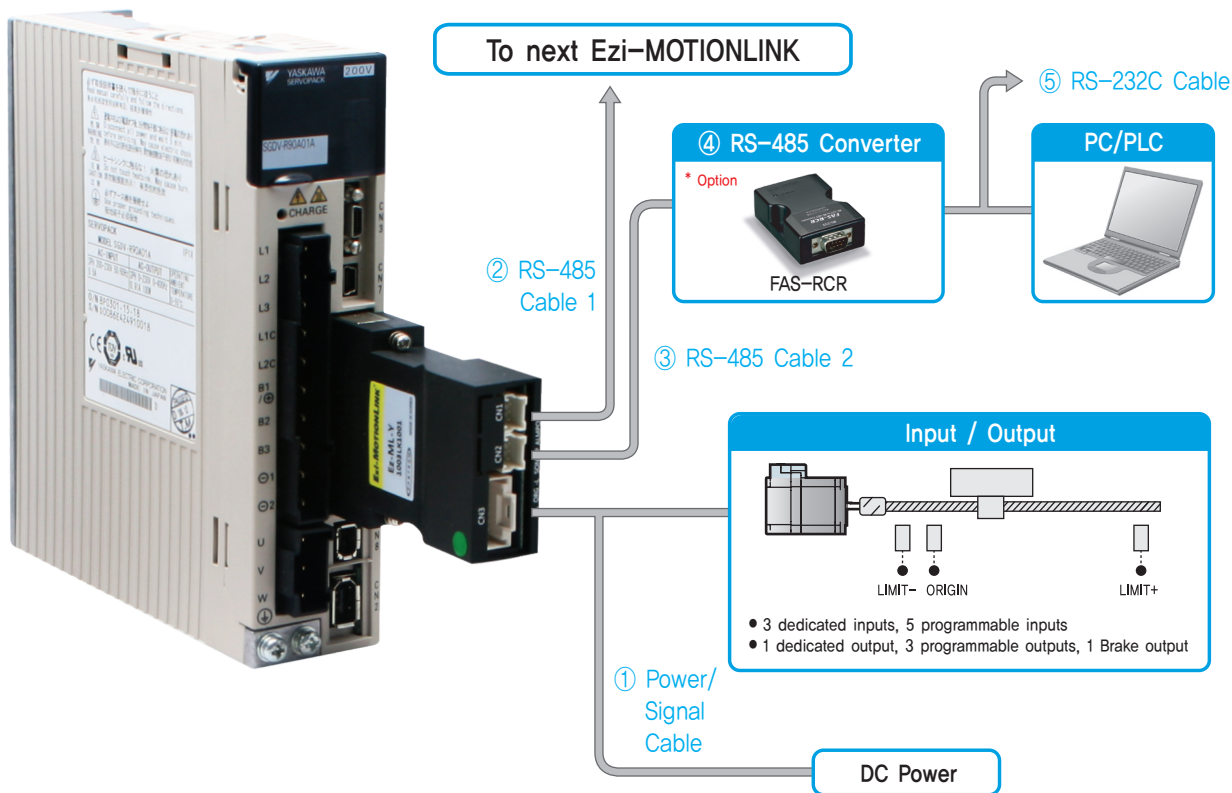
The pin map of servo drive connector differs depending on the servo drive type. (Please refer to the manual for details.)

7. Power & Input/Output Signal Connector(CN3)

No.	Function	I/O
1	DC24V	Input
2	GND	Input
3	F.GND	----
4	BRAKE	Output
5	LIMIT+	Input
6	LIMIT-	Input
7	ORIGIN	Input
8	Digital In1	Input
9	Digital In2	Input
10	Digital In3	Input
11	Digital In4	Input
12	Digital In5	Input
13	Compare Out	Output
14	Digital Out1	Output
15	Digital Out2	Output
16	Digital Out3	Output



System Configuration



1. Accessories

Connectors

These are connector specifications for controller cabling.

Purpose	Item	Part Number	Manufacturer
Power/Signal (CN3)	Housing	501646-1000	MOLEX
	Terminal	501648-1000 (AWG 26~28)	
RS-485 (CN1, CN2)	Housing	35507-0300	MOLEX
	Terminal	50212-8100	

※ The connectors above are supplied with the product. If you are using other parts, please make sure they meet the specifications.

2. Options

① Power/Signal Cable

These are the cables to connect Ezi-MOTIONLINK Plus-R, power, and other input/output devices.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Controller – Power & I/O Device Connection	CSVM-S-001F	1	Normal Cable	Maximum Length: 20m
	CSVM-S-002F	2		
	CSVM-S-003F	3		
	CSVM-S-005F	5		
	CSVM-S-001M	1	Robot Cable	
	CSVM-S-002M	2		
	CSVM-S-003M	3		
	CSVM-S-005M	5		

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.

② RS-485 Cable 1

These are the cables to connect Ezi-MOTIONLINK Plus-R with RS-485 network.

Purpose	Part Number	Length [m]	Cable Type
RS-485 Connection	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	

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.


③ RS-485 Cable 2

These are the cables to connect Ezi-MOTIONLINK Plus-R and FAS-RCR.

Purpose	Part Number	Length [m]	Cable Type
RS-485 Connection	CGNA-R-0R6F	0,6	Normal Cable
	CGNA-R-001F	1	
	CGNA-R-1R5F	1,5	
	CGNA-R-002F	2	
	CGNA-R-003F	3	
	CGNA-R-005F	5	

* If you need cables with length(in units of 1m) not listed on the table, please contact FASTECH for more information.

④ RS-485 Converter

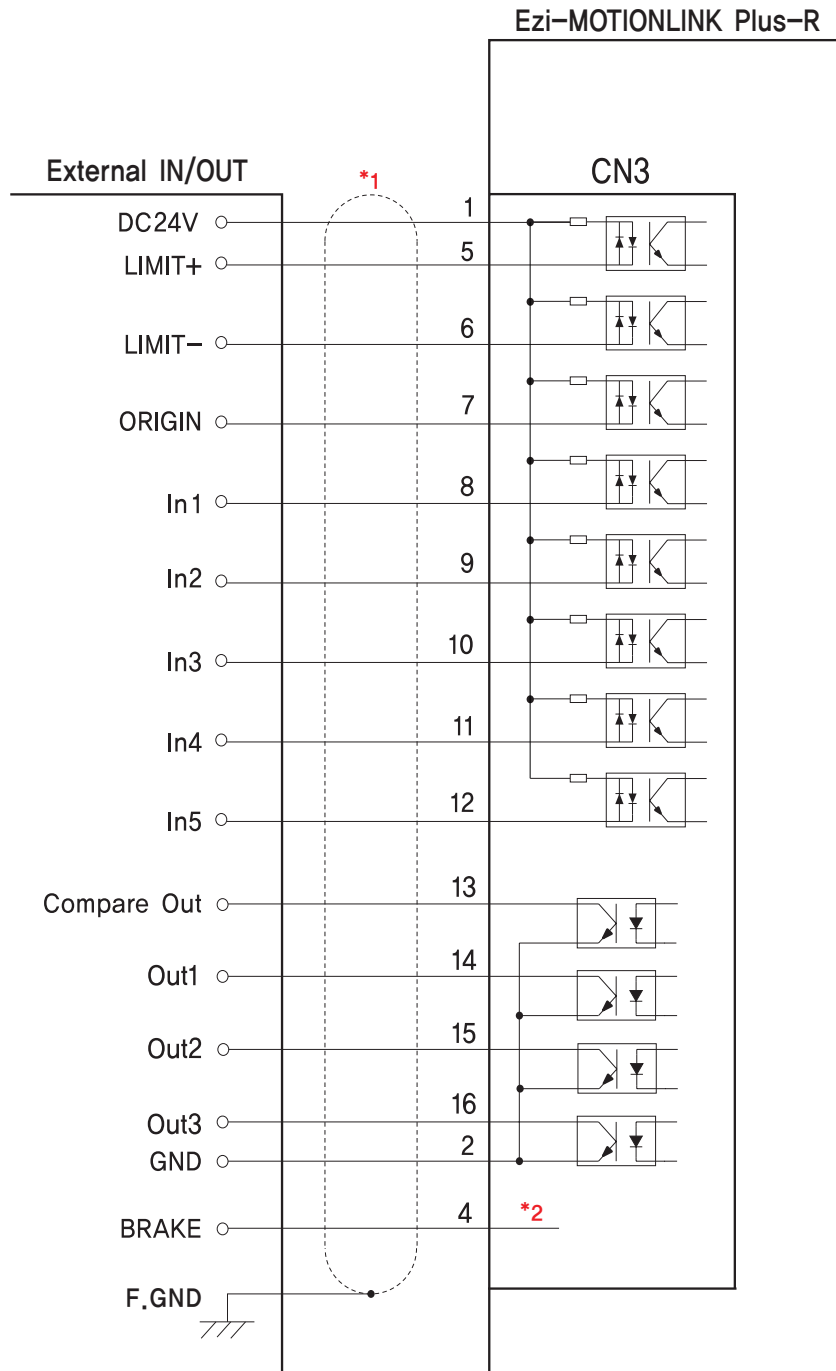
Purpose	Part Number	Specifications	Product Image	
RS-232C to RS-485 Converter	FAS-RCR	Baud Rate	Max, 115,2kbps	
		Comm. Distance	RS-232C: Max, 15m RS-485: Max, 1,2km	
		Connector	RS-232C: DB9 Female RS-485: RJ-45	
		Dimensions	50X75X23mm	
		Weight	38g	
		Power	Power supplied by RS-232C (DC5~24V external power can be applied)	

⑤ RS-232C Cable

These are the cables to connect FAS-RCR and RS-232C port of the host controller.

Purpose	Part Number	Length [m]	Cable Type
FAS-RCR – RS-232C Connection	CGNR-C-002F	2	Normal Cable
	CGNR-C-003F	3	
	CGNR-C-005F	5	

External Wiring Diagram



* 1) Shield Cable

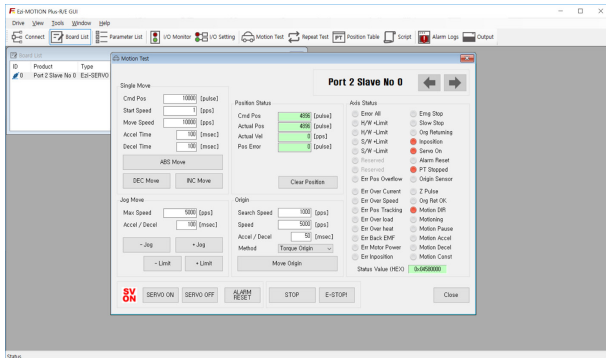
* 2) The brake terminal is an extension of the brake signal line of the servo drive. Therefore, when connecting the brake, refer to the user's manual of the servo drive.

CAUTION

In order to use the products listed in this catalog safely and correctly, be sure to read the instruction manual before using the product.

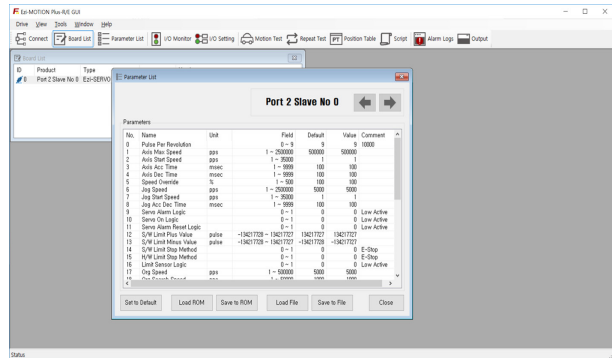
※ When connecting I/O cable between a controller and a host controller, please turn off the power of both controller and drive to prevent electric shock or to protect the drive from any damage.

● GUI(Graphic User Interface) Program



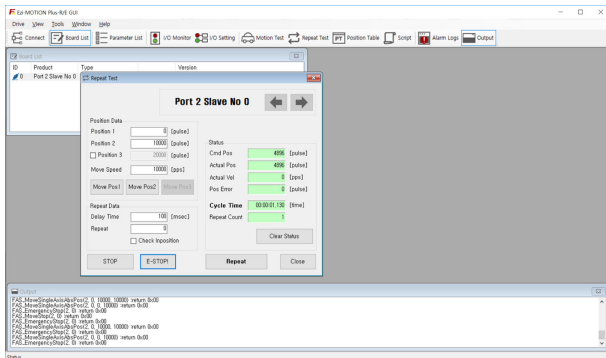
◆ Product List and Motion Test

The product list shows the products connected to the host controller. You can test single position movements, jog movements, and origin search operations, and monitor the operation status on the motion test window.



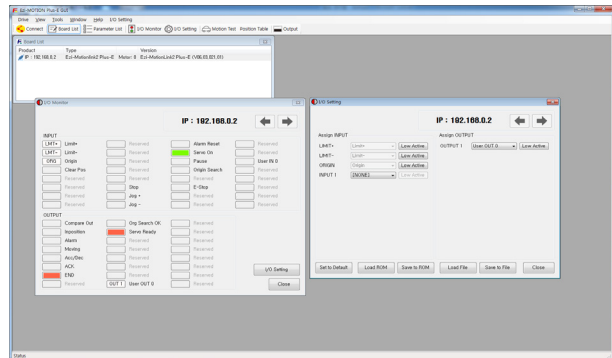
◆ Parameter List

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



◆ Motion Repeat and Status Monitoring

You can set the target position value, speed, delay time and number of repetitions for repeated motion test. A motion library(API) is also displayed on the screen.



◆ I/O Monitoring and Setting

You can check the status of input/output signals related to the current operation status, and you can assign the signals to the desired input/output channels.

- ※ GUI Program(Ezi-MOTIONLINK Plus-R) can be downloaded from website. (www.fastech-motions.com)
- ※ GUI Program(Ezi-MOTIONLINK Plus-R) supports Windows 7/8/10.
- ※ GUI Program(Ezi-MOTIONLINK Plus-R) is subject to change without prior notice for performance improvement.



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