

# 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

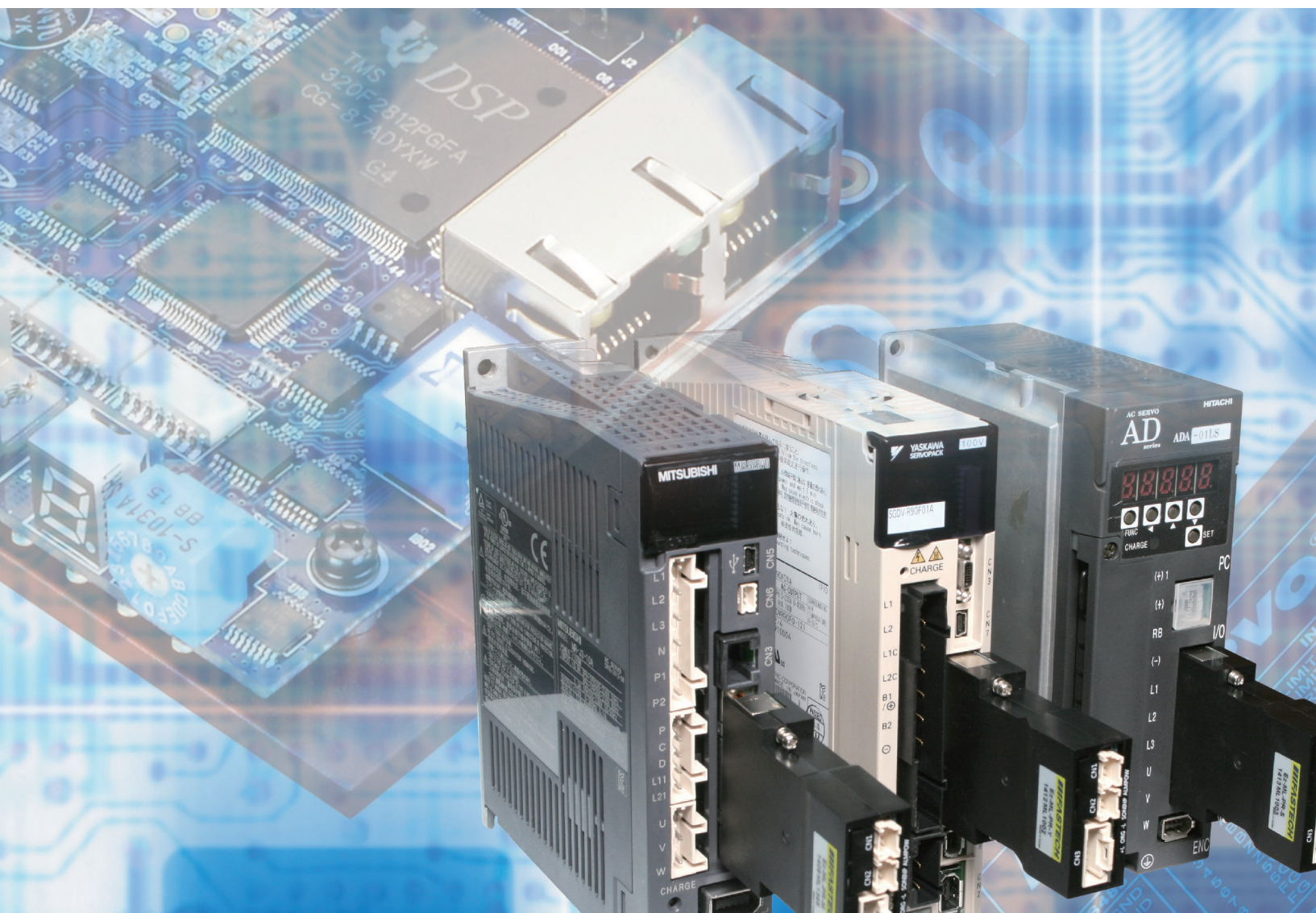
## Plus-R



CE



Fast, Accurate, Smooth Motion



*Fast, Accurate, Smooth Motion*

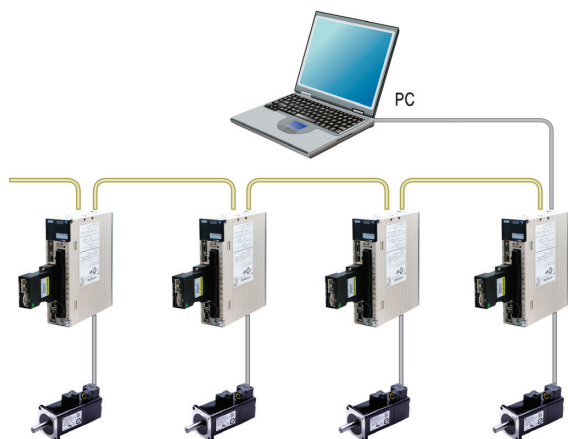
# **Ezi-MOTIONLINK<sup>®</sup> Plus-R**

**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 XP/7/8/10.



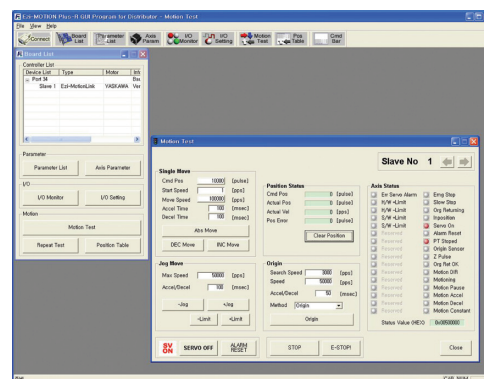
## 2 Plug-in to Various Servo Drives

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 Servo Drives.



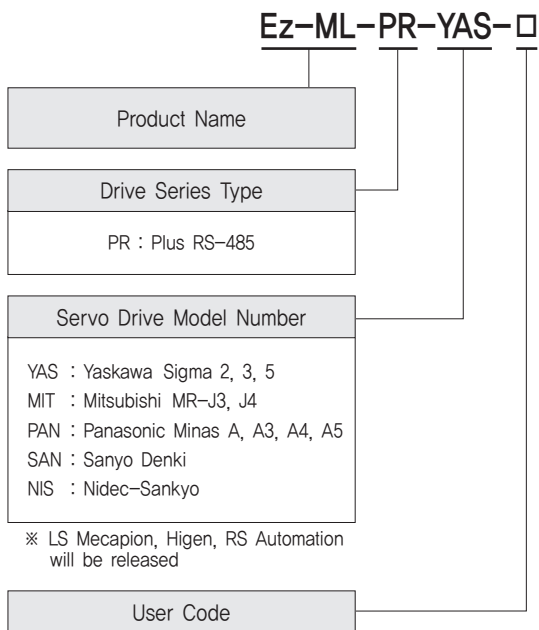
## 3 Various Motion Function

Ezi-MOTIONLINK supports various motions such as symmetric/asymmetric trapezoidal acceleration/deceleration, In addition, motion test, parameter setting, I/O setting, etc. can be performed simply and conveniently using the GUI(Graphic User Interface) provided.



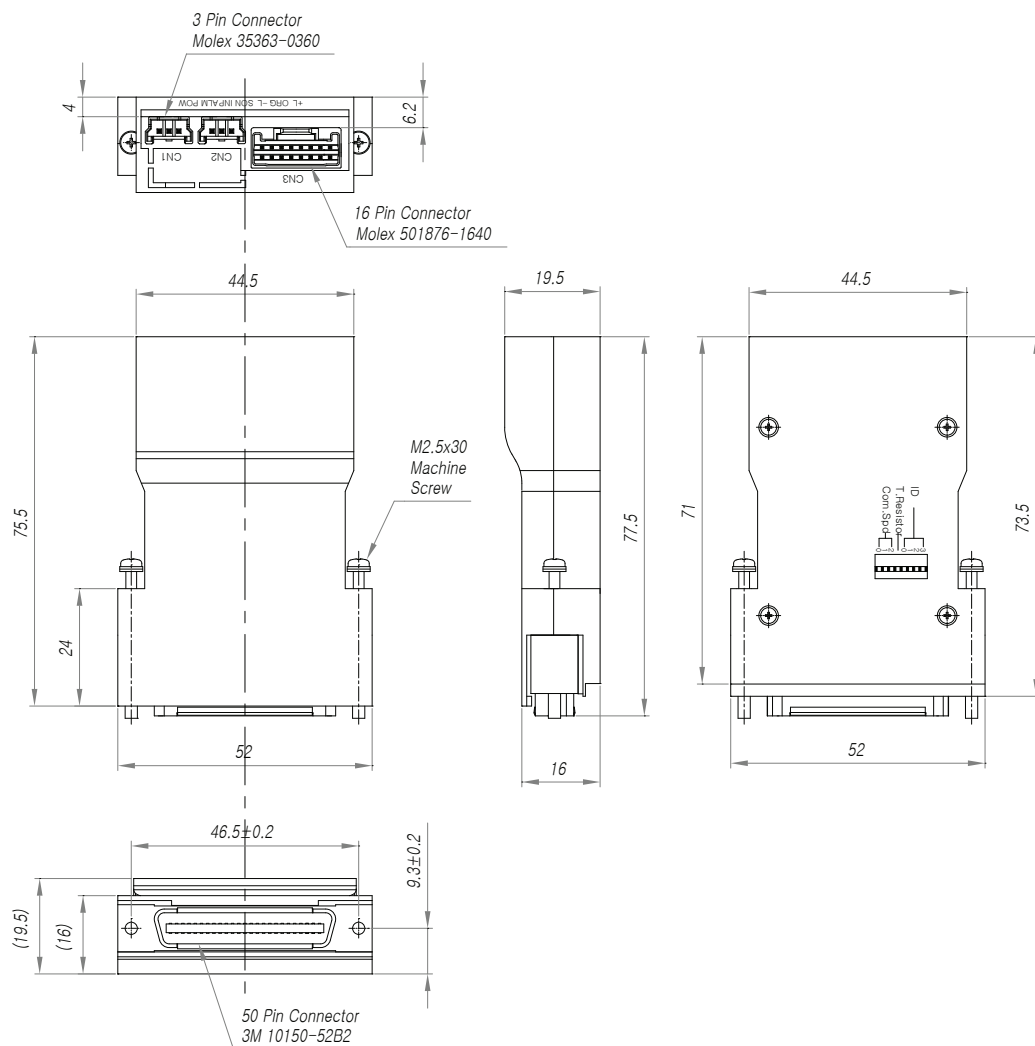
## ● Ezi-MOTIONLINK Plus-R Part Numbering

## ● Part Number



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

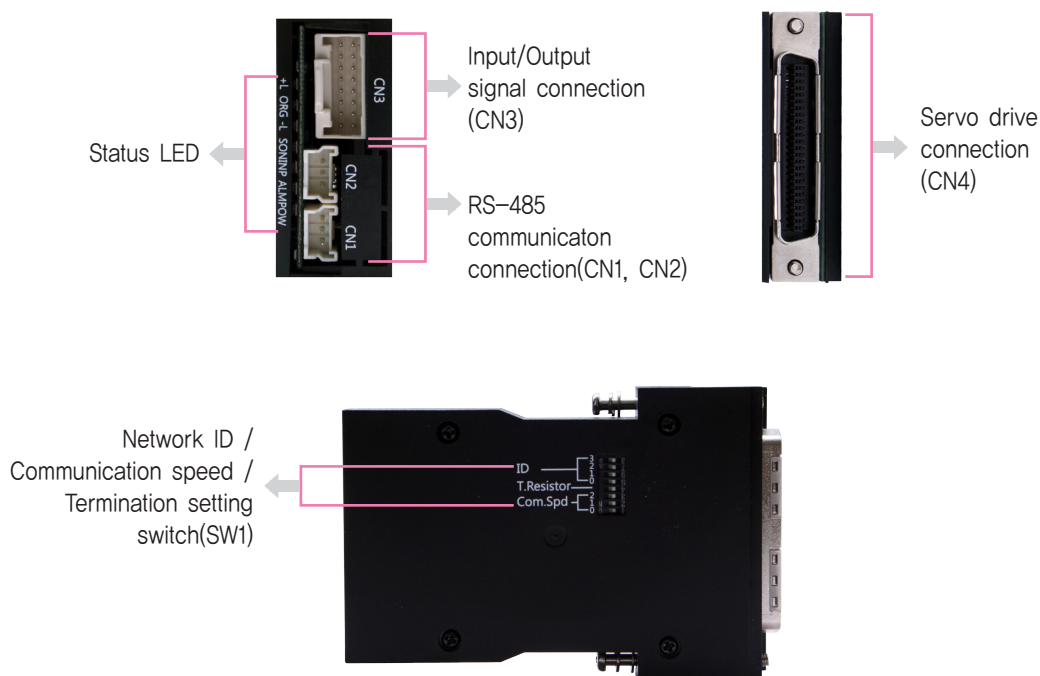
### ● Dimensions of Controller [mm]



## ● Specifications of Controller

Input Voltage		24VDC ±10%
Data Range		−134,217,728 ~ +134,217,727 [pulse] (28bit)
Type of Acc/Dec		Symmetric / Asymmetric trapezoidal acceleration & deceleration
Pulse Input Method		2 pulse mode (CW/CCW) of 1 pulse mode (Pulse/Dir) (Selected by parameter)
Max. Output Frequency		5MHz
Encoder Max. Input Frequency		4MHz
Input Signal		3 dedicated inputs (LIMIT+, LIMIT−, ORIGIN), 5 programmable inputs (photocoupler)
Output Signal		1 dedicated output (Compare Out), 3 programmable outputs (photocoupler), Brake
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 Communication 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 XP/7/8/10
Operating Condition	Ambient Temperature	· In Use: 0~55℃ · In Storage: −20~70℃
	Humidity	· In Use: 35~85% (Non-condensing) · In Storage: 10~90% (Non-condensing)
	Vib. Resist.	0.5g

## ● Settings and Operation



### 1. Status LED

Indication	Color	Function	ON/OFF Condition
POW	Green	Power input indication	LED is turned ON when power is applied
ALM	Red	Alarm indication	Lights when alarm occurs at Servo Drives
INP	Yellow	Complete positioning motion	Lights 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	Lights when -Limit sensor is detected
ORG	Green	Indicate Origin sensor detection	Lights when Origin sensor is detected
+L	Green	Indicate +Limit sensor detection	Lights when +Limit sensor is detected

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

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

### 3. Communication Speed Setting Switch(SW1.1~SW1.3)

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

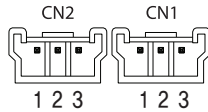
\*1 : Default setting value

### 4. Termination Setting Switch(SW1.4)

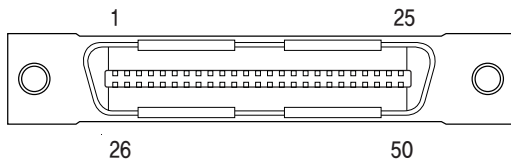
The drive installed at the end of the network must be terminated for reliable operation. Please termination setting switch is ON if drive installed at the end of the network.

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

NO.	Function
1	Data+
2	Data-
3	GND



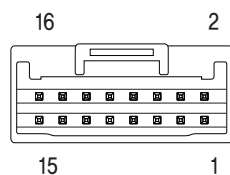
## 6. Servo Drive Connector(CN4)



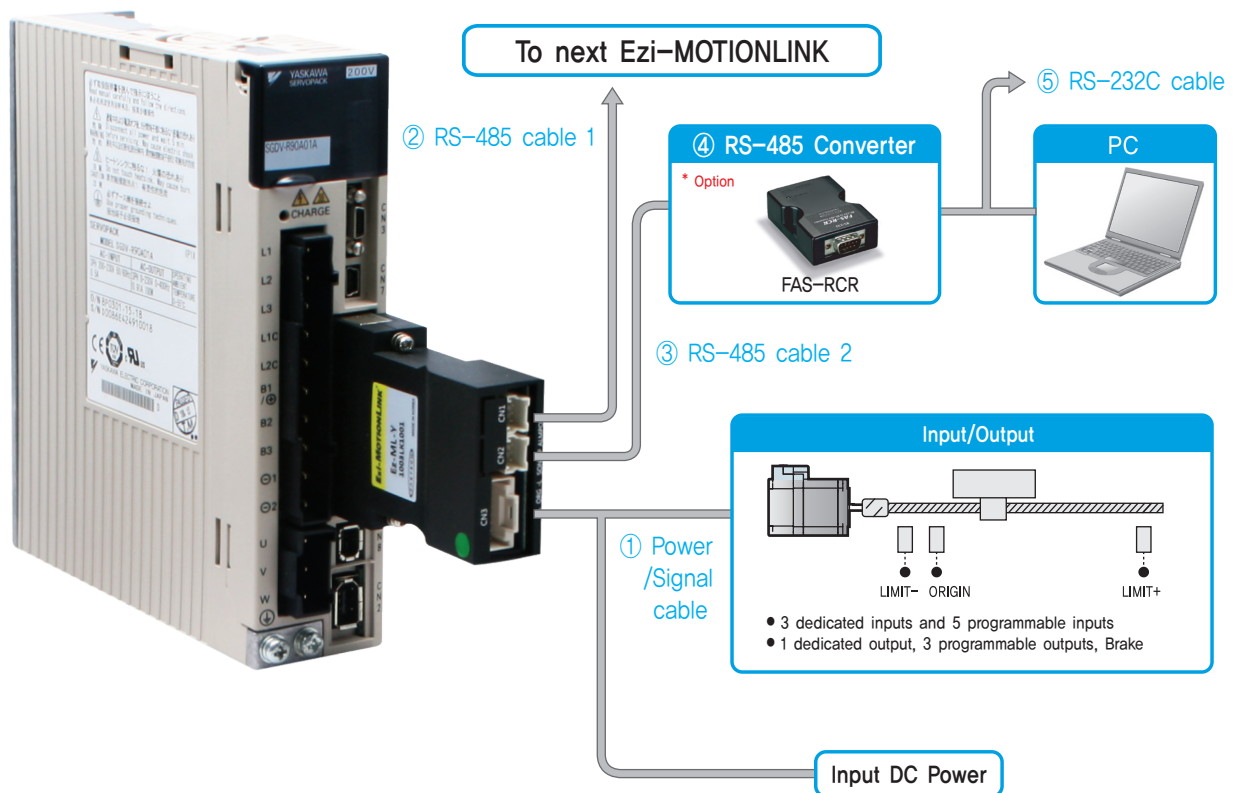
Pin Map of connector(CN4) which connects to Servo Drives is various according to type of Servo Drives. Please check Manual in detail. (It is plug-in to Servo Drives which are using normally so users do not have to concern.

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

NO.	Function	I/O
1	24VDC	Input
2	GND	Input
3	F.GND	----
4	BRAKE	출력
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. Options

#### ① Power/Signal Cable

Power and 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.

#### ② RS-485 Cable 1

Common cable to connect Ezi-SERVO-ALL-42/56, Ezi-STEP-ALL-42/56, Ezi-MOTIONLINK Plus-R and Ezi-SERVO Plus-R MINI thru by Network.

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	

#### ③ RS-485 Cable 2

RCR to Ezi-SERVO-ALL-42/56, FAS-RCR to Ezi-STEP-ALL-42/56, FAS-RCR to Ezi-SERVO Plus-R MINI, FAS-RCR to Ezi-MOTIONLINK Plus-R.

Item	Length [m]	Remark
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	

⑥ FAS-RCR(RS-232C to RS-485 Converter)

Item	Specification
Comm. Speed	Max. 115.2 [kbps]
Comm. Distance	RS-232C: Max. 15m RS-485: Max. 1.2km
Connection Type	RS-232C: DB9 Female RS-485: RJ-45
Dimension	50×75×23mm
Weight	38g
Power	Powered from PC (Usable for external DC5~24V)

⑤ RS-232C Cable

Available to connect between RS-232C port of master and FAS-RCR,

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

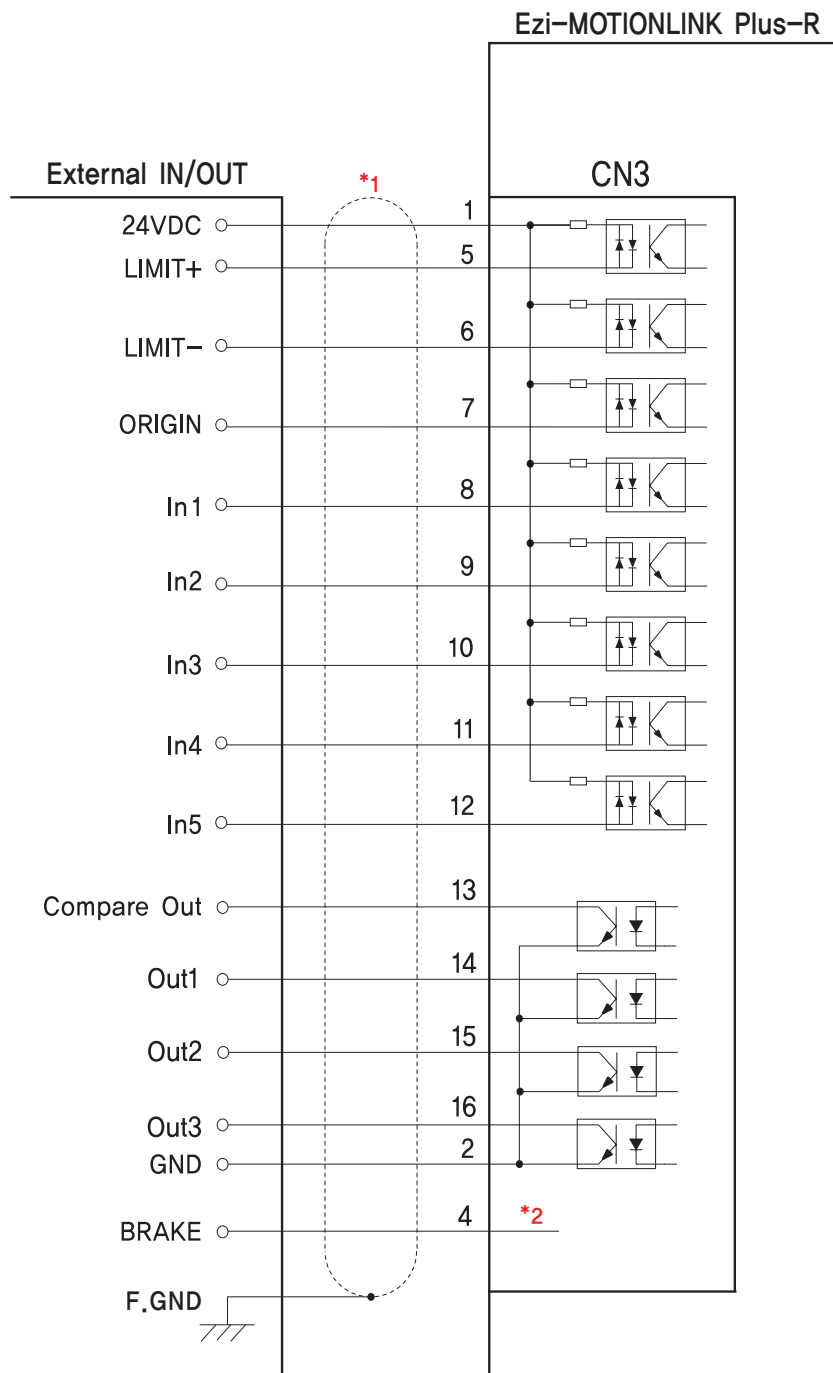
2. Connector Specifications

Connector specifications for cabling to drive.

Purpose	Item	Part Number	Manufacturer
Power/Signal Connector (CN4)	Housing Terminal	501646-1600 501648-1000(AWG 26~28)	MOLEX
RS-485 Connector (CN1,CN2)	Housing Terminal	35507-0300 50212-8100	MOLEX

※ Above connector is the most suitable product for the drive applied. Another equivalent connector can be used.

## ● External Wiring Diagram

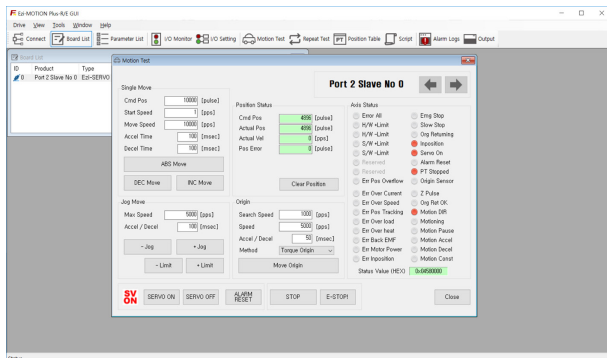


\* 1) Shield Cable

\* 2) Please refer to the manual of the servo drive and set the brake function if you want to use the brake function with Ezi-MOTIONLINK.

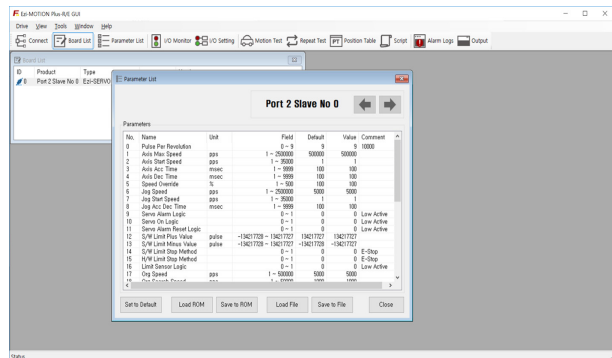
※ When connects I/O cable between controller and drive, please turn off the power of both controller and drive, in order to protect the drive from any damage.

## ● GUI(Graphic User Interface) Screenshot



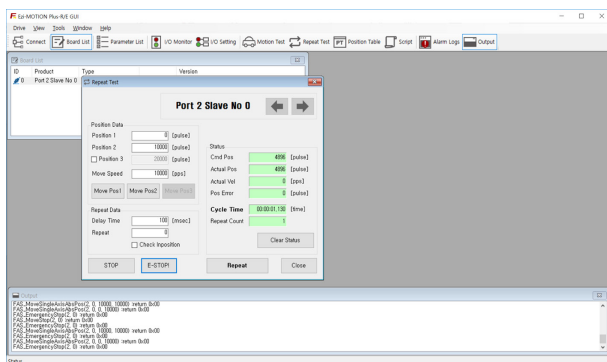
### ◆ Controller Lists and Motion Test

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.



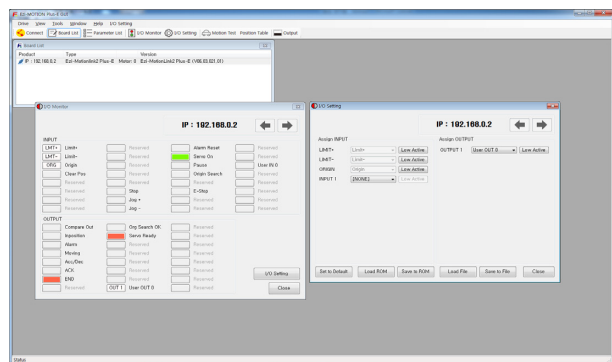
### ◆ Parameter List

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



### ◆ 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.

- ※ Graphic User Interface(GUI) Program can be downloaded from website. ([www.fastech.co.kr](http://www.fastech.co.kr))
- ※ Graphic User Interface(GUI) Program can support Window XP/7/8/10.
- ※ Graphic User Interface(GUI) Program can be update without prior notice for improving the performance or convenience of user.



*Fast, Accurate, Smooth Motion*

## **FASTECH Co., Ltd.**

Rm#1202, 401-dong, Bucheon Techno-Park,  
655, Pyeongcheon-ro, Bucheon-si Gyeonggi-do,  
Republic of Korea (Zip:14502)  
TEL : +82-32-234-6300 FAX : +82-32-234-6302  
E-mail : [fastech@fastech.co.kr](mailto:fastech@fastech.co.kr)  
Homepage : [www.fastech.co.kr](http://www.fastech.co.kr)