

Ezi-IO[®]

Input/Output Module

- RS-485 Based Digital I/O Module
- RS-485 Series Communication Protocol Supported
- Simple and Easy Wiring

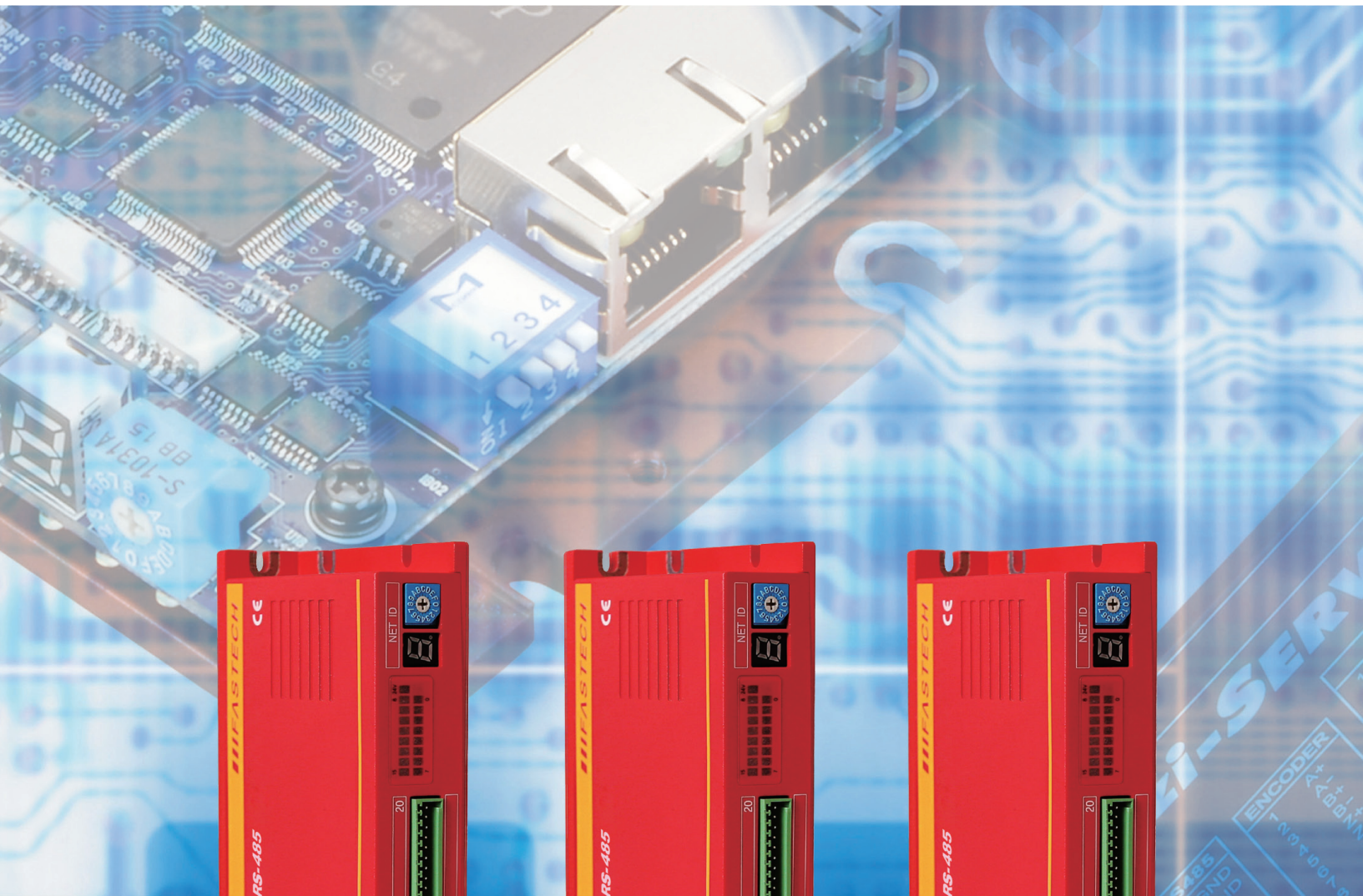
RS-485
DIO



CE



Fast, Accurate, Smooth Motion



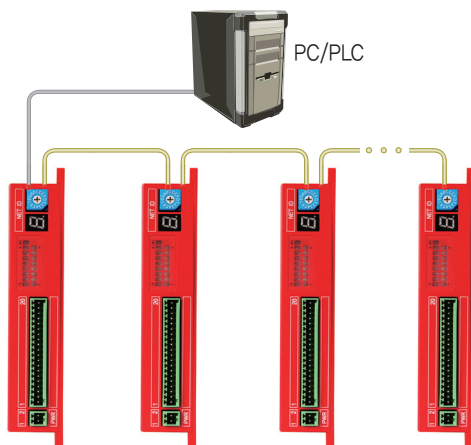
Fast, Accurate, Smooth Motion

Ezi-IO® **RS-485**
Input/Output Module **DIO**



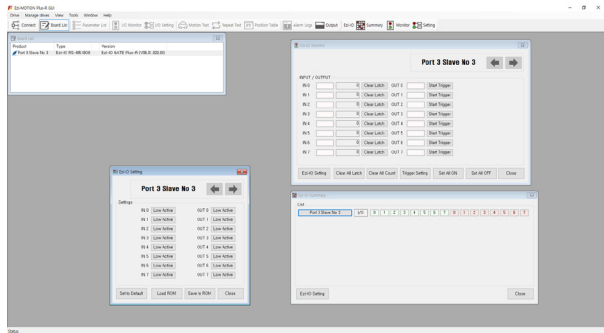
1 RS-485 Based Digital I/O Module

Ezi-I/O RS-485 DIO is a digital I/O module controlled with RS-485. Since it uses the same communication protocol as FASTECH's other RS-485 products, it can be applied very easily to the customers who have experiences using FASTECH's RS-485 products. Motion Library(API) is provided for programming under Windows 7/8/10.



2 GUI(Graphic User Interface) Program

You can easily monitor I/O status or set input signal level of Ezi-I/O RS-485 DIO with GUI (Graphical User Interface) software provided by FASTECH.



3 Various I/O Module

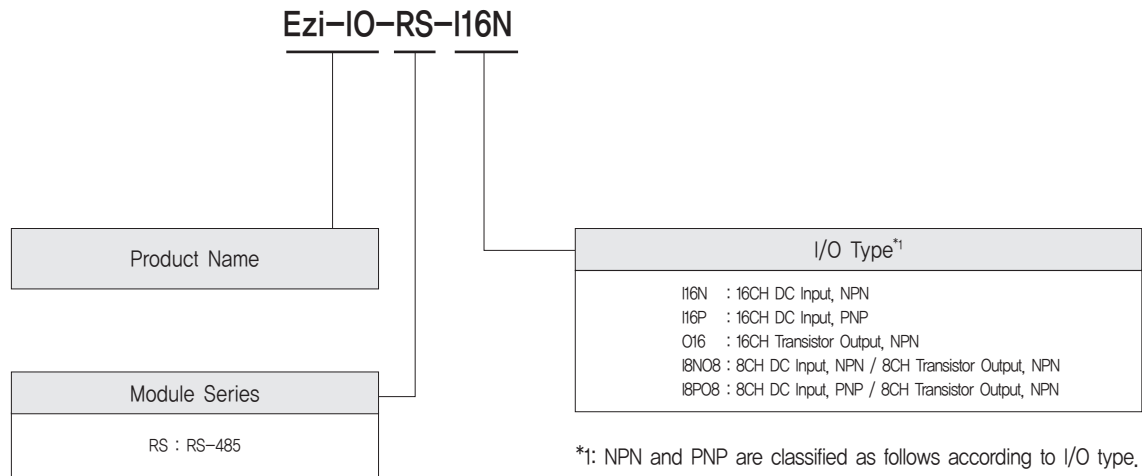
Ezi-I/O RS-485 DIO provides 16CH modules. There are 16CH DC input module, 16CH transistor output module, and 8CH DC input/8CH transistor output mixed module for 16CH type products. Also, Ezi-I/O RS-485 DIO provides NPN/PNP compatible modules to support various I/O devices.

4 Advanced Functions for I/O Signal Processing

The input module can detect and count very fast signals by using the latch function and the latch count function. The output module can use the trigger output function to set the signal output conditions according to the purpose.



● Ezi-IO RS-485 DIO Part Numbering



*1: NPN and PNP are classified as follows according to I/O type.

DC Input	NPN	Positive Common Type
	PNP	Negative Common Type
Transistor Output	NPN	Sink Output
	PNP	Source Output

● Ezi-IO RS-485 DIO Part Number

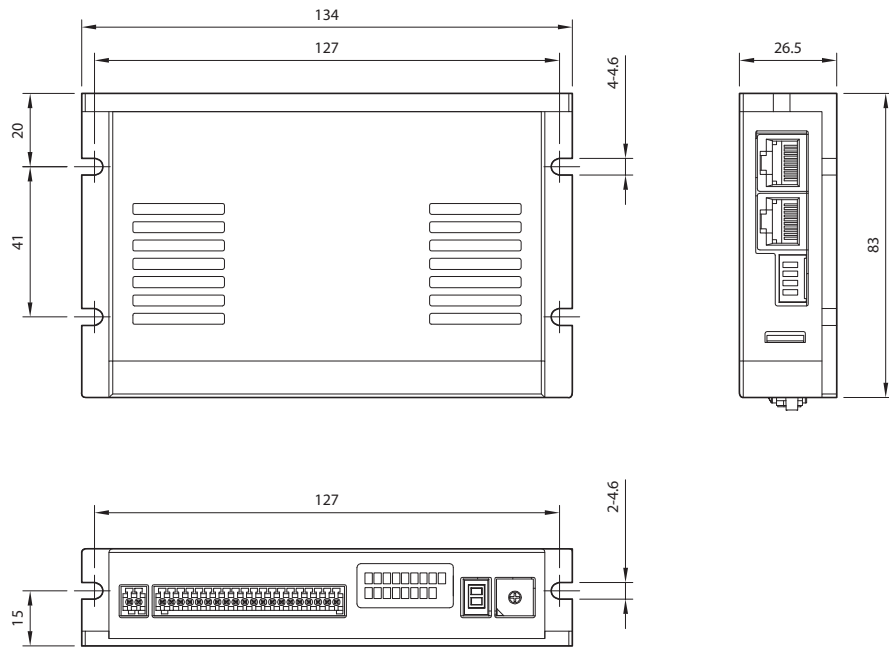
Part Number
Ezi-IO-RS-I16N
Ezi-IO-RS-I16P
Ezi-IO-RS-O16
Ezi-IO-RS-I8NO8
Ezi-IO-RS-I8PO8

● Specifications of Module

Model		Ezi-IO-RS-I16□	Ezi-IO-RS-O16N	Ezi-IO-RS-I808N	
Input Voltage		DC24V±10%			
Connection Method		Max, 16 axis connection (Daisy Chain)			
Current Consumption		Max, 150mA (Except load current)			
Operating Condition	Ambient Temperature	<ul style="list-style-type: none"> · In Use: 0~50°C · In Storage: -20~70°C 			
	Humidity	<ul style="list-style-type: none"> · In Use: 35~85% RH (Non-Condensing) · In Storage: 10~90% RH (Non-Condensing) 			
	Vib. Resist.	0.5g			
Function	Input	Number of Input Channels	16CH	8CH	
		Rated Input Voltage	DC24V	DC24V	
		Rated Input Current	5mA/CH	5mA/CH	
		Isolation Method	None	None	
		Common Method	16CH/COM	8CH/COM	
		Off→On Response Time	10μs or lower	10μs or lower	
		On→Off Response Time	70μs or lower	70μs or lower	
	Output	Number of Output Channels	-	16CH	8CH
		Rated Output Voltage	-	DC24V	DC24V
		Rated Output Current	-	0.2A/CH	0.2A/CH
		Isolation Method	-	None	None
		Common Method	-	16CH/COM	8CH/COM
		Off→On Response Time	-	4μs or lower	4μs or lower
		On→Off Response Time	-	140μs or lower	140μs or lower
LED Display		<ul style="list-style-type: none"> · I/O Status (0~15) · EXT_DC24V Status (24V) 		<ul style="list-style-type: none"> · I/O Status (0~7/8~15) · EXT_DC24V Status (24V) 	
Communication Interface		<ul style="list-style-type: none"> · RS-485 Communication · Baud Rate : 9,600~921,600bps 			
GUI		User Interface Program within Windows			
Library		Motion Library (API) for windows 7/8/10			

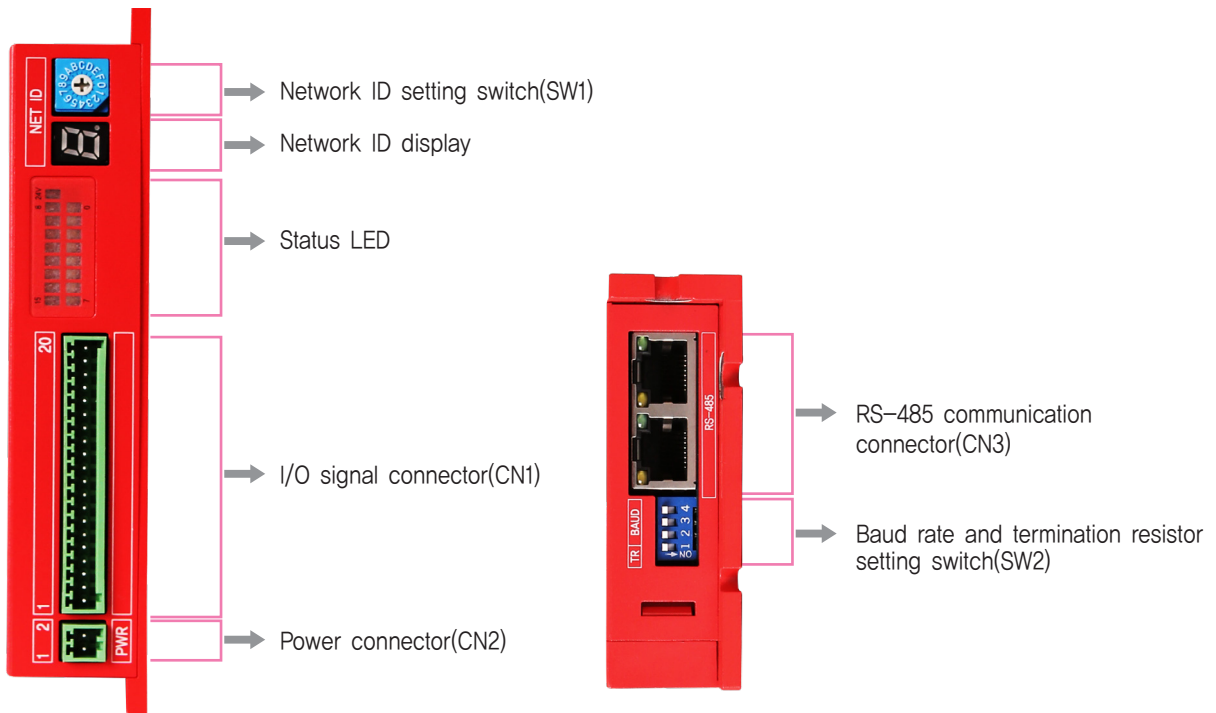
* □: NPN / PNP Type

● Dimensions of Module [mm]



● Settings and Operation

FASTECH Ezi-IO RS-485 DIO

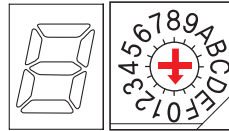


1. Status LED

Name	Color	Function	Description
24V	Red	OFF	EXT_DC24V is not supplied
		ON	EXT_DC24V is supplied
0~15	Green	OFF	Input Module : Input is OFF Output Module : Output is OFF
		ON	Input Module : Input is ON Output Module : Output is ON

2. Network ID Setting Switch(SW1)

Value	ID No.	Value	ID No.
0	0	8	8
1	1	9	9
2	2	A	10
3	3	B	11
4	4	C	12
5	5	D	13
6	6	E	14
7	7	F	15



3. Baud Rate and Termination Resistor Setting Switch(SW2)

Termination Resistor Setting Switch(SW2.1)

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

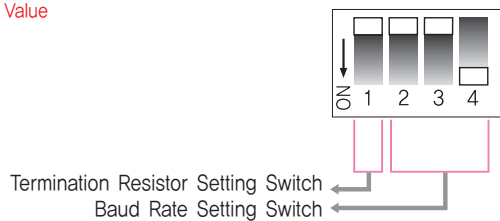
- SW2.1 ON: Termination resistor is set
- SW2.1 OFF: Termination resistor is not set

Baud Rate Setting Switch(SW2.2~SW2.4)

Baud rate is set by SW2.2~SW2.4 as follows.

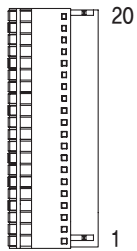
SW2.1	SW2.2	SW2.3	SW2.4	Baud Rate [bps]
–	OFF	OFF	OFF	9,600
–	ON	OFF	OFF	19,200
–	OFF	ON	OFF	38,400
–	ON	ON	OFF	57,600
–	OFF	OFF	ON	115,200*
–	ON	OFF	ON	230,400
–	OFF	ON	ON	460,800
–	ON	ON	ON	921,600

*1 : Default Value



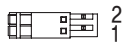
4. I/O Signal Connector(CN1)

No.	Function	I/O
1	EXT_DC24V	Input
2	EXT_DC24V	Input
3	SIGNAL	I/O
4	SIGNAL	I/O
5	SIGNAL	I/O
6	SIGNAL	I/O
7	SIGNAL	I/O
8	SIGNAL	I/O
9	SIGNAL	I/O
10	SIGNAL	I/O
11	SIGNAL	I/O
12	SIGNAL	I/O
13	SIGNAL	I/O
14	SIGNAL	I/O
15	SIGNAL	I/O
16	SIGNAL	I/O
17	SIGNAL	I/O
18	SIGNAL	I/O
19	EXT_GND	Input
20	EXT_GND	Input



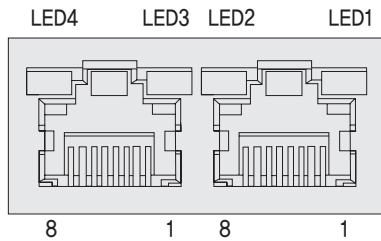
5. Power Connector(CN2)

No.	Function	I/O
1	DC24V	Input
2	GND	Input

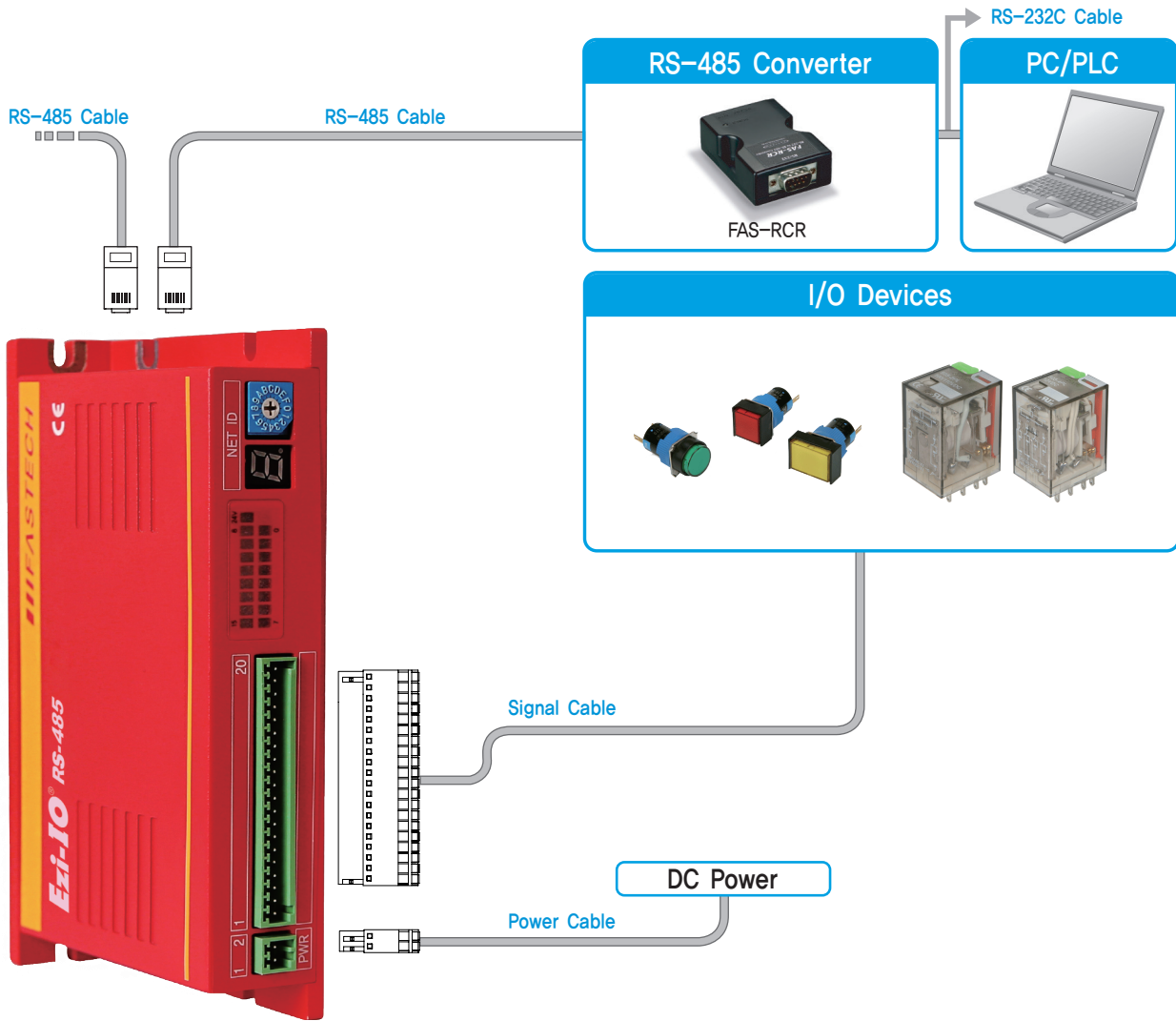


6. RS-485 Communication Connector(CN3)

No.	Function	No.	Function
1	GND	6	Data-
2	GND	7	GND
3	Data+	8	GND
4	GND	LED 1, 3	Module Status
5	GND	LED 2, 4	Communication Status



System Configuration



1. Accessories

Connectors

Purpose	Item	Part Number	Manufacturer
Power (CN1)	Terminal Block	ESC250V-02P	DINKLE
Signal (CN2)	Terminal Block	ESC250V-20P	DINKLE

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


2. Options

① RS-485 Cable

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

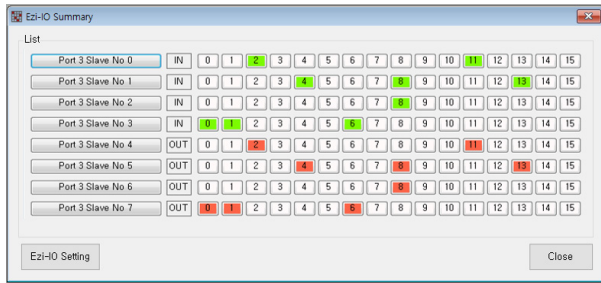
Purpose	Part Number	Specifications	Product Image	
RS-232C to RS-485 Converter	FAS-RCR	Baud Rate	Max, 115.2kbps	
		Comm. Distance	RS-232C: Max, 15m RS-485: Max, 1.2km	
		Connector	RS-232C: DB9 Female RS-485: RJ-45	
		Dimensions	50X75X23mm	
		Weight	38g	
		Power	Power supplied by RS-232C (DC5~24V external power can be applied)	

③ RS-232C Cable

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

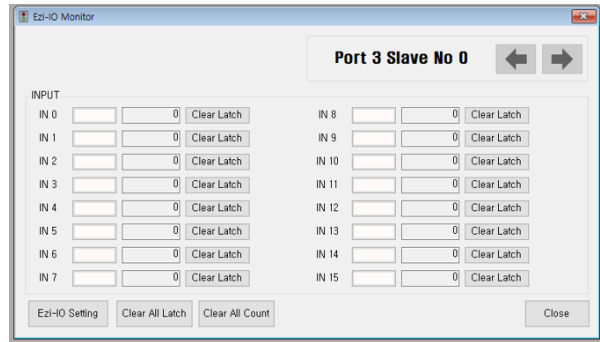
Purpose	Part Number	Length [m]	Cable Type
FAS-RCR – RS-232C Connection	CGNR-C-002F	2	Normal Cable
	CGNR-C-003F	3	
	CGNR-C-005F	5	

● GUI(Graphic User Interface) Program



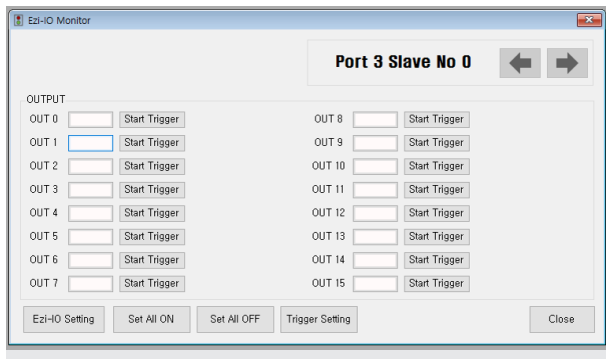
◆ Ezi-IO RS-485 DIO Summary

The operation status of the connected I/O modules can be monitored at once.



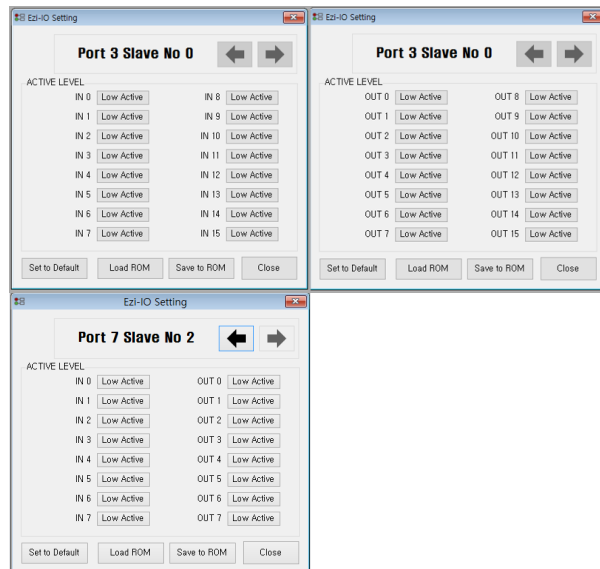
◆ Input Module Monitor

You can check the input status and latch status of each input channels.



◆ Output Module Monitor

You can check the output status and trigger status of each output channels.



◆ I/O Logic Setting

This function selects the level of the actual signal to recognize the I/O signal as [ON]. All changes can be saved and restored when needed.

- ※ 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.



Fast, Accurate, Smooth Motion

FASTECH Co., Ltd.

Rm#1202, 401-dong, Bucheon Techno-Park,
655, Pyeongcheon-ro, Bucheon-si Gyeonggi-do,
Republic of Korea (Postal Code: 14502)
TEL : +82-32-234-6317 FAX : +82-32-234-6302
E-mail : sales@fastech-motions.com
Homepage : www.fastech-motions.com