

# Extension Function IO Module

## ST-5725(Master) ST-5726(Slave) User Manual



Version 1.03

**2013 CREVIS Co.,Ltd**

DOCUMENT CHANGE SUMMARY				
REV	PAGE	REMARKS	DATE	EDITOR
1.0	New Document		2011/10/21	JE KANG
1.01		Add Caution	2012/1/13	JE KANG
		Add the Certificate RoHS	2012/3/22	JE KANG
1.02		Changed Crevis TEL	2013/4/4	JE KANG
1.03		Environment Spec. 60°C→55°C (UL Temp)	2013/7/3	JE Kang

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## 1. Important Notes

Solid state equipment has operational characteristics differing from those of electromechanical equipment.

Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls describes some important differences between solid state equipment and hard-wired electromechanical devices.

Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will CREVIS be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, CREVIS cannot assume responsibility or liability for actual use based on the examples and diagrams.

### Warning!



- ✓ **If you don't follow the directions, it could cause a personal injury, damage to the equipment or explosion**
- Do not assemble the products and wire with power applied to the system. Else it may cause an electric arc, which can result into unexpected and potentially dangerous action by field devices. Arching is explosion risk in hazardous locations. Be sure that the area is non-hazardous or remove system power appropriately before assembling or wiring the modules.
- Do not touch any terminal blocks or IO modules when system is running. Else it may cause the unit to an electric shock or malfunction.
- Keep away from the strange metallic materials not related to the unit and wiring works should be controlled by the electric expert engineer. Else it may cause the unit to a fire, electric shock or malfunction.

### Caution!


- ✓ **If you disobey the instructions, there may be possibility of personal injury, damage to equipment or explosion. Please follow below Instructions.**
- Check the rated voltage and terminal array before wiring. Avoid the circumstances over 55°C of temperature. Avoid placing it directly in the sunlight.
- Avoid the place under circumstances over 85% of humidity.
- Do not place Modules near by the inflammable material. Else it may cause a fire.
- Do not permit any vibration approaching it directly.
- Go through module specification carefully, ensure inputs, output connections are made with the specifications. Use standard cables for wiring.
- Use Product under pollution degree 2 environment.

## 1.1. Safety Instruction

### 1.1.1. Symbols

<p><b>DANGER</b></p> 	<p>Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death property damage, or economic loss</p>
<p><b>IMPORTANT</b></p>	<p>Identifies information that is critical for successful application and understanding of the product</p>
<p><b>ATTENTION</b></p> 	<p>Identifies information about practices or circumstances that can lead to personal injury, property damage, or economic loss.</p> <p>Attentions help you to identity a hazard, avoid a hazard, and recognize the consequences</p>

### 1.1.2. Safety Notes

<p><b>DANGER</b></p> 	<p>The modules are equipped with electronic components that may be destroyed by electrostatic discharge. When handling the modules, ensure that the environment (persons, workplace and packing) is well grounded. Avoid touching conductive components, e.g. FnBus Pin.</p>
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### 1.1.3. Certification

c-UL-us UL Listed Industrial Control Equipment, certified for U.S. and Canada

See UL File E235505

RoHS (EU, CHINA)

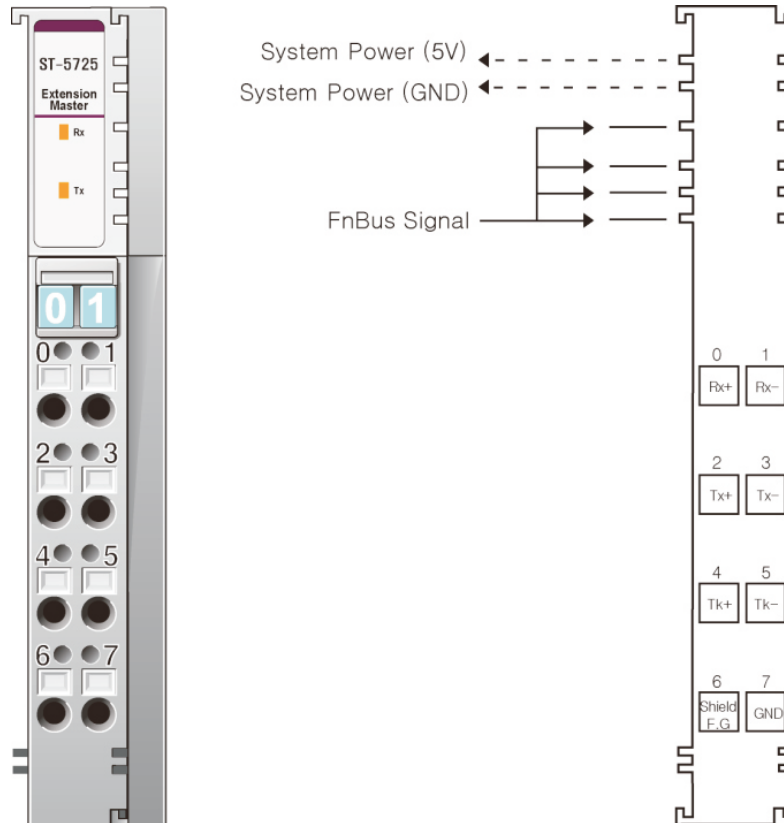
## 2. EXTENSION FUNCTION IO MODULE LIST

ST-Number	Description	ID(hex)	Production Status
ST-5725	Extension Master Module	None	Active
ST-5726	Extension Slave Module	None	Active

### 3. Specification

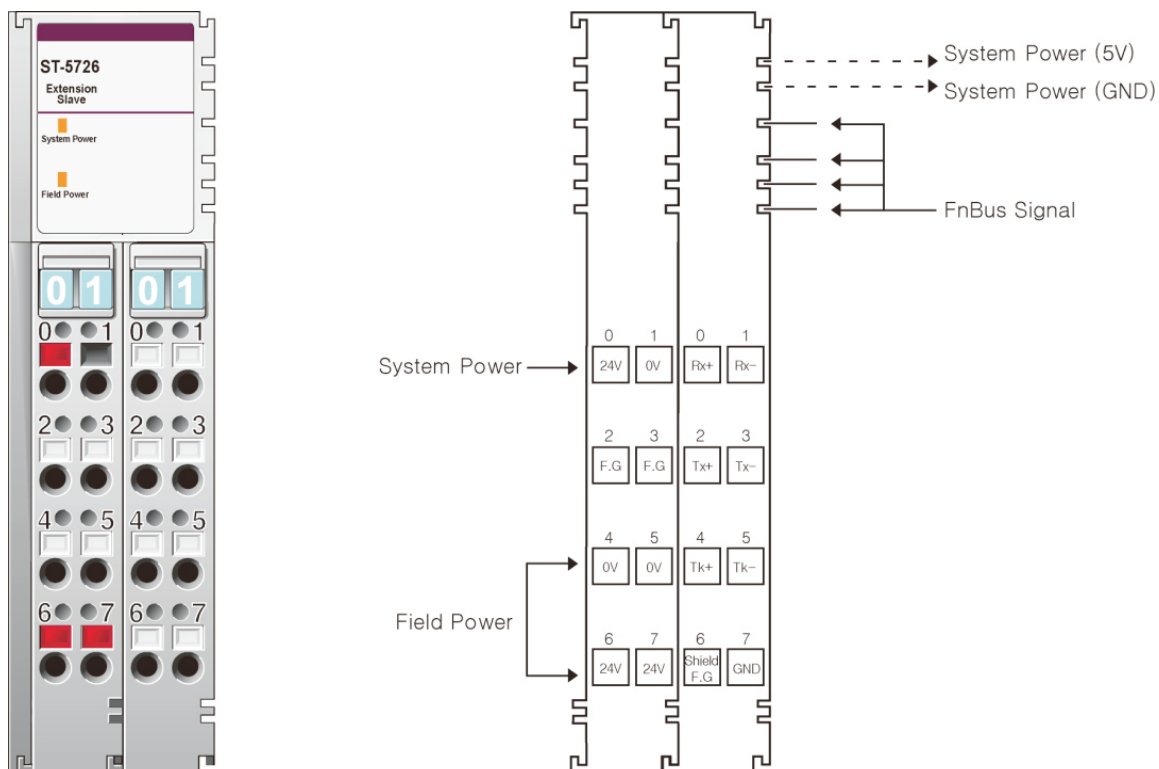
#### 3.1. The Interface

##### 3.1.1. ST-5725 (Master)



Pin No.	Description	Pin No.	Description
0	Rx+	1	Rx-
2	Tx+	3	Tx-
4	Tk+	5	Tk-
6	Shield/FG	7	GND

### 3.1.2. ST-5726 (Slave)



Pin No.	Description	Pin No.	Description
0	Rx+	1	Rx-
2	Tx+	3	Tx-
4	Tk+	5	Tk-
6	Shield/FG	7	GND



### 3.2. Environment Specification

Environmental Specifications	
Operating Temperature	-20 ℃~55 ℃
Storage Temperature	-40 ℃ ~85 ℃
Relative Humidity	5%~90% non-condensing
Operating Altitude	2000m
Mounting	DIN rail
General Specifications	
Shock Operating	10g
Shock Non-Operating	30g
Vibration/Shock resistance	Displacement : 0.012Inch p-p from 10~57Hz Acceleration : 2G's from 57~500Hz Sweep Rate : 1 octave Per Minute Axes to test : x, y, z Frequency Sweeps Per Axis : 10
EMC resistance burst/ESD	EMC Directive
Installation Pos. /Protect. Class	Variable / IP20
Product Certification	CE

### 3.3. Specification

#### 3.3.1. ST-5725 (Master)

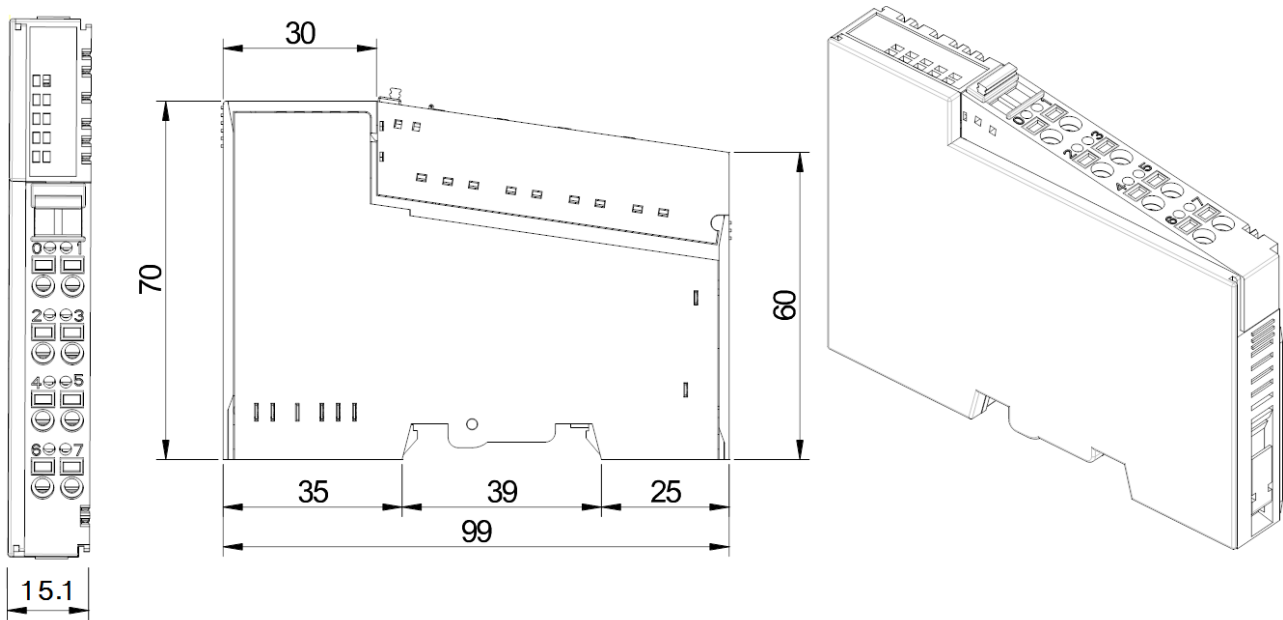
Items	
Module Specification	
Number of Channel	Max. 32 slots
Indicators	2 Green Rx/Tx Status Indicator
Max. Length Extension Line Between Master and Slave	Approximately Max. 300m
Requirements	ST-5726 (Slave), Extension Cable
Number of Extension Nodes	Max. 3nodes
Common Type	RTB 8Points
General Specification	
Power Dissipation	Max. 100mA @5.0Vdc
Isolation	I/O to Logic : Photocoupler Isolation
Field Power	No Connection with Field Power
Wiring	Extension Cable
Weight	70g
Module Size	19.1mm × 99mm × 70mm
Environment Condition	Refer to Environment Specification.(Refer to page 8)

### 3.3.2. ST-5726 (Slave)

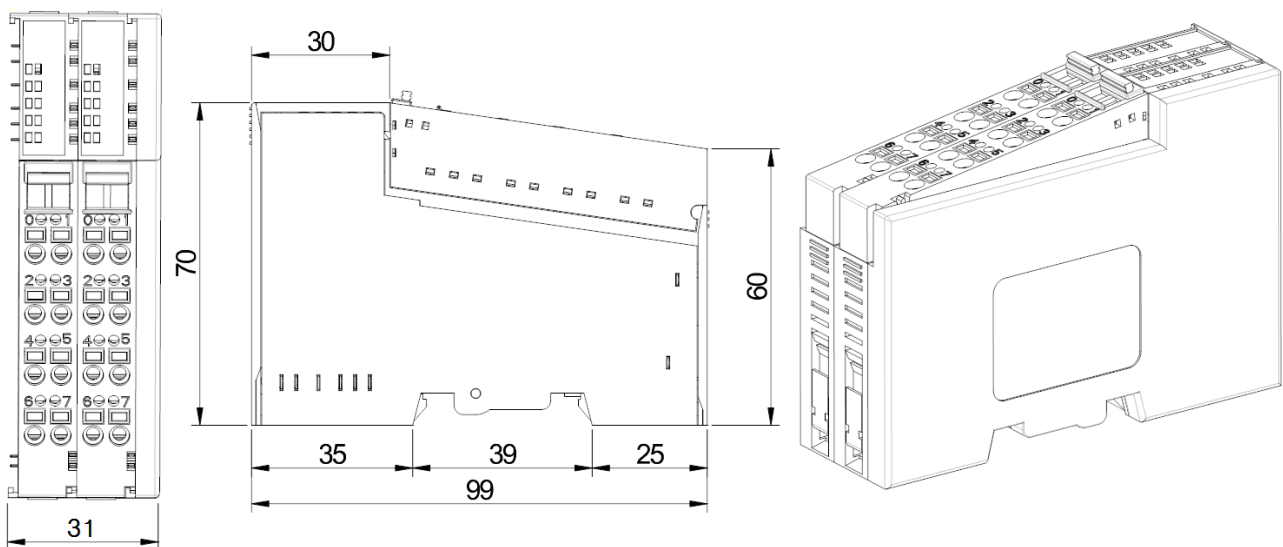
Items	
Module Specification	
Number of Extension I/O slots	Max. 32 slots
System Input Voltage range	11 Vdc to 28.8 Vdc
System Power Input Voltage	Normal 24Vdc
Field Power Input Voltage	Normal 24Vdc $\pm 20\%$
FnBus Output Voltage	Max. 5Vdc, 1A
Field Power Contacts Current	Max. 10A
Indicators	2 Green System Power/Field Power Status Indicator
Max. Length Extension Line Between Master and Slave	Approximately Max. 300m
Requirements	ST-5725 (Master), Extension Cable
Number of Extension Nodes	Max. 3 nodes
Common Type	RTB 8Points
General Specification	
Power Dissipation	Max. 100mA @5.0Vdc
Isolation	I/O to Logic : Photocoupler Isolation
Field Power	No Connection with Field Power
Wiring	Extension Cable
Weight	125g
Module Size	27.2mm × 99mm × 70mm
Environment Condition	Refer to Environment Specification.(Refer to page 8)

## 4. Dimension

### 4.1. ST-5725 (Master)

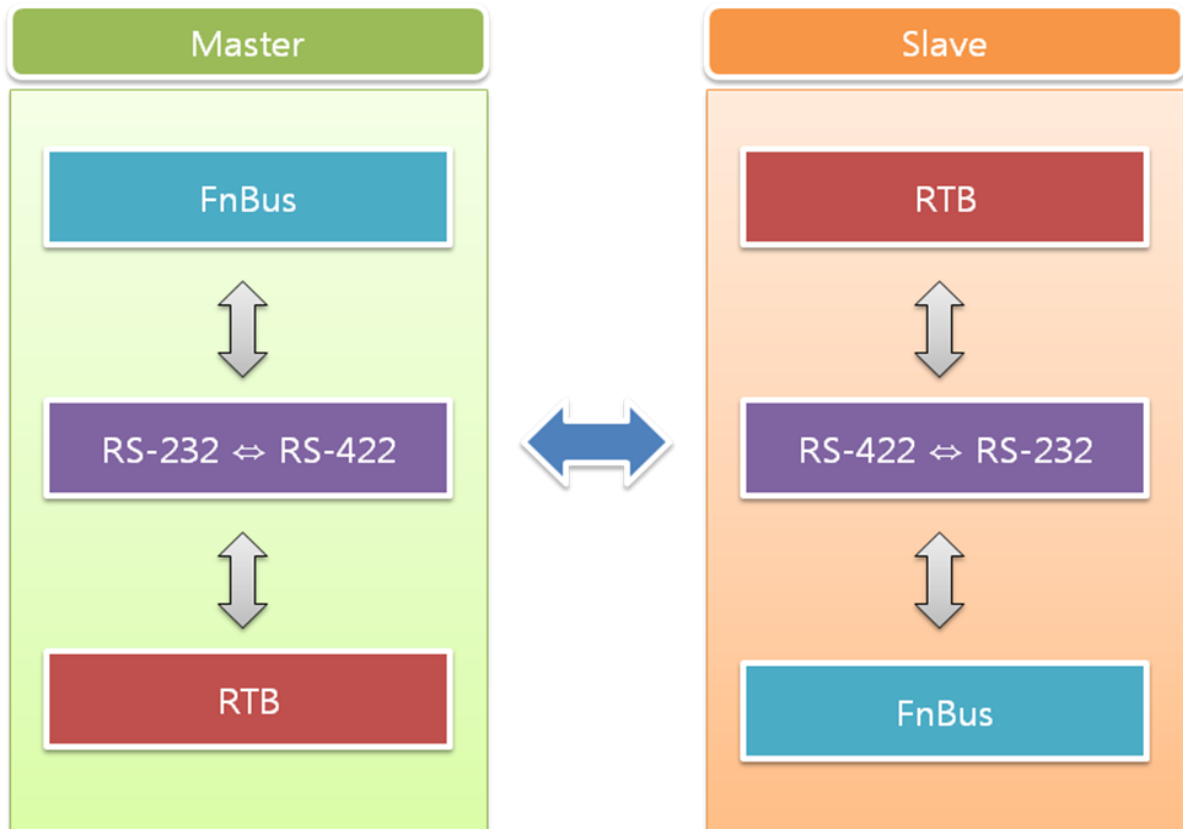


### 4.2. ST-5726 (Slave)

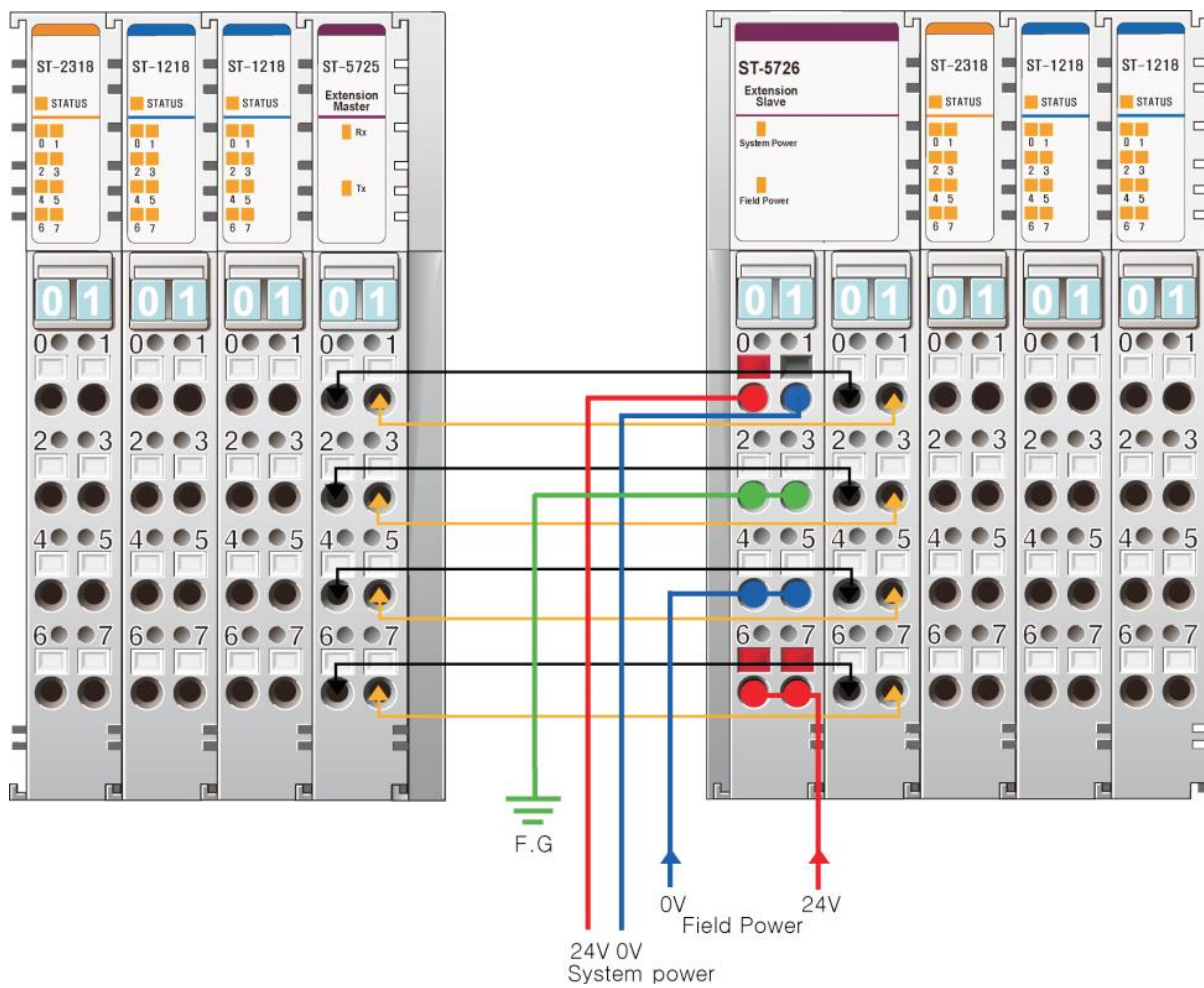


## 5. Wiring

### 5.1. ST-5725 and ST-5726 System Diagram



## 5.2. Wiring Example



## 6. Trouble Shooting

### ATTENTION



In this manual, it couldn't be described all variety case with Network Adapter of several protocols. So if you couldn't find any fault after investigating all below cases, refer to NA user manual.

### 6.1. ST-5725 (Master)

LED Status		State	Action
Rx LED	OFF	Rx Signal OFF-State	Make sure of Rx Signal
	GREEN	Rx Signal ON-State	Normal Operation
Tx LED	OFF	Tx Signal OFF-State	Make sure of Tx Signal
	GREEN	Tx Signal ON-State	Normal Operation

### 6.2. ST-5726 (Slave)

LED Status		State	Action
System Power LED	OFF	System Power OFF-State	Make sure of System Power.
	GREEN	System Power ON-State	Normal Operation
Field Power LED	OFF	Field Power OFF-State	Make sure of Field Power.
	GREEN	Field Power ON-State	Normal Operation