

# iModule

## 01

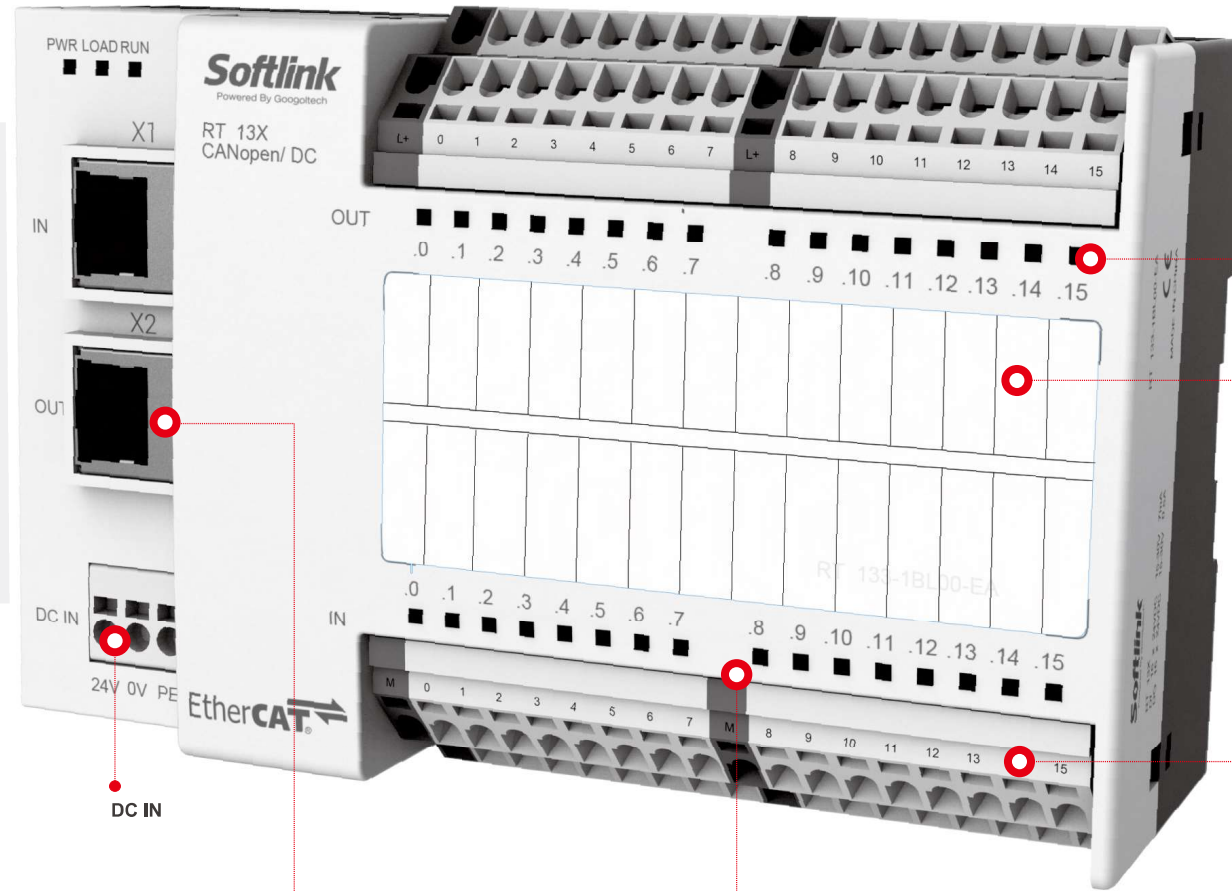
### Distributed Fieldbus I/O

- Compact design, vibration resistance
- Spring terminals, get reliable connection
- Two layers terminals, saving wiring space
- Support PNP and NPN inputs
- Unique design of the internal power supply
- Decimal button, flexible switching from 0-99 stations
- Up to 32 channels for data communication

**iModule series Fieldbus I/O integrated communication ports, power module, I/O module all in one, compact design and space-saving. It is widely used in various applications for stable and high cost performance.**

#### Compact design in one unit

Unified shell dimension : 155\*105\*55mm ( W/H/D )  
 Installation : standard DIN rail mounting,  
 specification is TS35/7.5  
 IP20

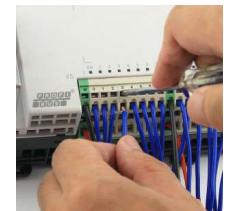


Clear status and diagnosis monitoring

Clever labeling

Compact design

Space-saving compact dimension, two layers of spring terminals



Various of Fieldbus options



EtherCAT



Modbus

CANopen

Optimized electrical design

Every DI/DO terminal has a power connector inside for reducing wiring time

DI modules support PNP and NPN modes

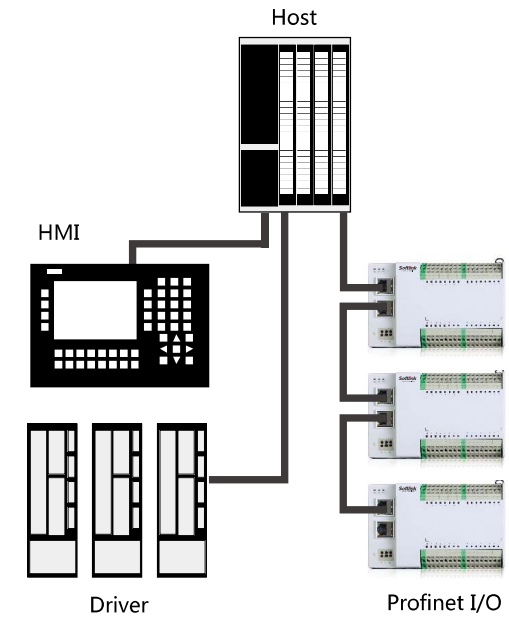


Order No.	Product Description	Order No.	Product Description
RT131-1BL00-PN	Digital32 Input	RT133-1BL00-PN	Digital16 Input/16 Output ( Mosfet )
RT132-1BL00-PN	Digital32 Output ( Mosfet )	RT133-1PL00-PN	Digital16 Input/16 Output ( Relay )

Order No.	RT131-1BL00-PN	RT132-1BL00-PN
Type	DigitalInput Module	DigitalOutput Module
<b>Digital Input</b>		
Number of Inputs	32	0
Input filter	0.5ms	-
Nominal input voltage	24 V DC(-15%/+20%)	-
"1" signal voltage	15~30VDC,7mA	-
"0" signal voltage	0~5VDC	-
Port protect	Impact over voltage protection	-
<b>Digital Output</b>		
Number of Inputs	0	32
Output Type	-	Mosfet
Nominal input voltage	-	24 V DC(-15%/+20%)
"1" signal voltage	-	Open drain output
"0" signal voltage	-	Max:1.5VDC,10kΩ Load
Max. output current(per Ch.)	-	0.5A
Short circuit current(per Ch.)	-	1A
Max. output current(Total.)	-	8A*2
On-Resistance	-	0.3Ω(type)/0.6Ω(Max.)
Port protect	-	Over voltage & overcurrent protection
Voltage supply	24 V DC(-15%/+20%)	24 V DC(-15%/+20%)
Electrical isolation(Bus/Field potential)	AC 500V	AC 500V
Protocol	PROFINET IO IRT	PROFINET IO IRT
Connector	2 x RJ45	2 x RJ45
Communication Rate	100 Mbps full duplex	100 Mbps full duplex
Address config	MAC+IP	MAC+IP
Fixed method	DIN Rail(TS35)	DIN Rail(TS35)
Fixed method	T.B.D	T.B.D
<b>LED Indicate</b>		
PWR	Green	Green
BFBus failure	Red	Red
SFSystem failure	Red	Red
MTMaintain	Orange	Orange

Order No.	Product Description	Order No.	Product Description
RT131-1BL00-PN	Digital32 Input	RT133-1BL00-PN	Digital16 Input/16 Output ( Mosfet )
RT132-1BL00-PN	Digital32 Output ( Mosfet )	RT133-1PL00-PN	Digital16 Input/16 Output ( Relay )

Order No.	RT133-1BL00-PN	RT133-1PL00-PN
Type	DigitalI/O Module	DigitalI/O Module
<b>Digital Input</b>		
Number of Inputs	16	16
Input filter	0.5ms	0.5ms
Nominal input voltage	24 V DC(-15%/+20%)	24 V DC(-15%/+20%)
“1” signal voltage	15~30VDC,7mA	15~30VDC,7mA
“0” signal voltage	0~5VDC	0~5VDC
Port protect	Impact over voltage protection	Impact over voltage protection
<b>Digital Output</b>		
Number of Inputs	16	16
Output Type	Mosfet	Relay
Nominal input voltage	24 V DC(-15%/+20%)	30 V DC/250V AC
“1” signal voltage	Open drain output	Relay干接点闭合
“0” signal voltage	Max:1.5VDC,10kΩ Load	Relay干接点断开
Max. output current(per Ch.)	0.5A	1A
Short circuit current(per Ch.)	1A	2A
Max. output current(Total.)	8A	16A
On-Resistance	0.3Ω(type)/0.6Ω(Max.)	≤50mΩ
Port protect	Over voltage & overcurrent protection	-
Voltage supply	24 V DC(-15%/+20%)	24 V DC(-15%/+20%)
Electrical isolation(Bus/Field potential)	AC 500V	AC 500V
Protocol	PROFINET IO IRT	PROFINET IO IRT
Connector	2 x RJ45	2 x RJ45
Communication Rate	100 Mbps full duplex	100 Mbps full duplex
Address config	MAC+IP	MAC+IP
Fixed method	DIN Rail(TS35)	DIN Rail(TS35)
Fixed method	T.B.D	T.B.D
<b>LED Indicate</b>		
PWR	Green	Green
Bus failure	Red	Red
System failure	Red	Red
Maintain	Orange	Orange



Profinet is a fieldbus standard based on industrial Ethernet technology introduced by PROFIBUS International (PROFIBUS International, PI). Profinet features a complete solution for different needs including eight modules, followed by real-time communication, distributed field devices, motion control, distributed automation, network installation, IT standards and information security, and fail-safe process automation. Depending on the response time, PROFINET supports three types of communication, TCP / IP standard communications, real-time (RT) communications and isochronous real-time (IRT) communication. PROFINET can constitute almost unlimited network size, network length of 10 / 100Base-T = 100m.

iModule series of Profinet I / O connect distributed devices to a high-speed network, featuring reliable, high-speed, real-time, high immunity and compatibility characteristics.

Order No.	RT131-1BL00-PN	RT132-1BL00-PN	RT133-1BL00-PN	RT133-1PL00-PN
RDYReady	Green	Green	Green	Green
Digital I/O	Green	Green	Green	Green
Dimensions(W/H/D,mm)	155×105×55	155×105×55	155×105×55	155×105×55

Order No.	Specification
RT133-3FC00-PN	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputVoltage/4 Output
RT133-3FC10-PN	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputCurrent/4 Output

Order No.	RT133-3FC00-PN	RT133-3FC10-PN
Type	MixedSignalI/O Module	MixedSignalI/O Module
<b>Digital Input</b>		
Number of Inputs	8	8
Input filter	0.5ms	0.5ms
Nominal input voltage	24 V DC(-15%/+20%)	24 V DC(-15%/+20%)
"1" signal voltage	15~30VDC,7mA	15~30VDC,7mA
"0" signal voltage	0~5VDC	0~5VDC
Port protect	Impact over voltage protection	Impact over voltage protection
<b>Digital Output</b>		
Number of Inputs	8	8
Output Type	Mosfet	Mosfet
Nominal input voltage	24 V DC(-15%/+20%)	24 V DC(-15%/+20%)
"1" signal voltage	Open drain output	Open drain output
"0" signal voltage	Max:1.5VDC,10kΩ Load	Max:1.5VDC,10kΩ Load
Max. output current(per Ch.)	0.5A	0.5A
Short circuit current(per Ch.)	1A	1A
Max. output current(Total.)	4A	4A
On-Resistance	0.3Ω(type)/0.6Ω(Max.)	0.3Ω(type)/0.6Ω(Max.)
Port protect	Over voltage & overcurrent protection	Over voltage & overcurrent protection
<b>Analog Input</b>		
Number of Inputs	8	8
Signal Type	Single-ended Voltage	Single-ended Voltage
Input impedance	> 200kΩ	249Ω
Range	0~5V,0~10V,±1.25V,±2.5V,±5V,±10V	0~5V,0~10V,±1.25V,±2.5V,±5V,±10V
Resolutions	16bit	16bit
Total error	<±0.1%	<±0.1%
Conversion rate	100kSPS/ch	100kSPS/ch
<b>Analog Output</b>		
Number of Inputs	4	4
OutputRange	0~10V or 0~20mA	0~10V or 0~20mA
Load	>5kΩ	>5kΩ
Resolutions	16bit	16bit

Order No.	RT133-3FC00-PN	RT133-3FC10-PN
Output Error	<0.1%	<0.1%
Output settling time	~100 μs	~100 μs
Voltage supply	24 V DC(-15%/+20%)	24 V DC(-15%/+20%)
Electrical isolation (Bus/Field potential)	AC 500V	AC 500V
Protocol	PROFINET IO IRT	PROFINET IO IRT
Connector	2 x RJ45	2 x RJ45
Communication Rate	100 Mbps full duplex	100 Mbps full duplex
Address config	MAC+IP	MAC+IP
Fixed method	DIN Rail(TS35)	DIN Rail(TS35)
Distributed clocks	T.B.D	T.B.D
<b>LED Indicate</b>		
PWR	Green	Green
Bus failure	Red	Red
System failure	Red	Red
Maintain	Orange	Orange
Ready	Green	Green
Digital I/O	Green	Green
Dimensions(W/H/D,mm)	155×105×55	155×105×55

## Remote I/O

### EtherCAT

Order No.	Product Description
RT131-1BL00-EA	Digital32 Input
RT132-1BL00-EA	Digital32 Output ( Mosfet )
RT133-1BL00-EA	Digital16 Input/16 Output ( Mosfet )
RT133-1PL00-EA	Digital16 Input/16 Output ( Relay )
RT133-3FC00-EA	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputVoltage/4 Output
RT133-3FC10-EA	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputCurrent/4 Output

### CANopen

Order No.	Product Description
RT131-1BL00-CAN	Digital32 Input
RT132-1BL00-CAN	Digital32 Output ( Mosfet )
RT133-1BL00-CAN	Digital16 Input/16 Output ( Mosfet )
RT133-1PL02-CAN	Digital16 Input/16 Output ( Relay )
RT133-3HF01-CAN	Digital8 Input/8 Output ( Mosfet ) , Analog12 Input/2 Output
RT133-3RJ00-CAN	Digital8 Input/8 Output ( Mosfet ) , 4Thermal Resistance
RT133-4TJ00-CAN	Digital8 Input/8 Output ( Mosfet ) , 4 Thermocouple
RT131-4RH00-CAN	16Thermal Resistance
RT131-4TH00-CAN	16 Thermocouple

### PROFINET BUS

Order No.	Product Description
RT131-1BL02-DP	Digital32 Input
RT132-1BL02-DP	Digital32 Output ( Mosfet )
RT133-1BH02-DP	Digital8 Input/8 Output ( Mosfet )
RT133-1BL02-DP	Digital16 Input/16 Output ( Mosfet )
RT133-1PL02-DP	Digital16 Input/16 Output ( Relay )
RT133-3FC00-DP	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputVoltage/4 Output
RT133-3FC10-DP	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputCurrent/4 Output
RT133-3KB00-DP	Digital16 Input/8 Output ( Mosfet ) , Analog4 Input(Voltage/Current)
RT133-3HC10-DP	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputVoltage/4 Output
RT133-3RJ00-DP	Digital8 Input/8 Output ( Mosfet ) , 4Thermal Resistance
RT133-4TJ00-DP	Digital8 Input/8 Output ( Mosfet ) , 4 Thermocouple
RT131-4RH00-DP	16Thermal Resistance
RT131-4TH00-DP	16 Thermocouple

### Modbus

Order No.	Product Description
RT131-1BL00-MB	Digital32 Input
RT132-1BL00-MB	Digital32 Output ( Mosfet )
RT133-1BL00-MB	Digital16 Input , 16 Output ( Mosfet )
RT133-1PL00-MB	Digital16 Input , 16 Output ( Relay )

### PROFINET

Order No.	Product Description
RT131-1BL00-PN	Digital32 Input
RT132-1BL00-PN	Digital32 Output ( Mosfet )
RT133-1BL00-PN	Digital16 Input/16 Output ( Mosfet )
RT133-1PL00-PN	Digital16 Input/16 Output ( Relay )
RT133-3FC00-PN	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputVoltage/4 Output
RT133-3FC10-PN	Digital8 Input/8 Output ( Mosfet ) , Analog8 InputCurrent/4 Output

### Fieldbus Connector

Order No.	Product Description
300 972-BA1000	35° outlet, without programming port
300 972-BB1000	35° outlet, with programming port
300 972-BA2000	90° outlet, without programming port, fast-wiring
300 972-BB2000	90° outlet, with programming port, fast-wiring
300 972-BA3000	180° outlet, without programming port
300 972-BA1200	90° outlet, without programming port
300 972-BB1200	90° outlet, with programming port
300 972-BA6000	Self-diagnosis 90° outlet, without programming port
300 972-BB6000	Self-diagnosis 90° outlet, with programming port
300 972-BA5000	90° outlet, without programming port, optical isolation
300 972-BA8000	Multi-Angle, without programming port
300 972-BB8000	Multi-Angle, with programming port
300 901-1BG10	90°Field-bus connector
300 901-1BB10	180°Field-bus connector
300 972-CA01	90°Outlet

### Fieldbus Cable

Order No.	Product Description
830-0EH10	Profibus DP Cable
830-3EH10	Profibus DP Flexible Cable
830-CA02	CANopen Cable
840-2AH10	EtherCAT/Profinet Cable

# Wiring Diagram of PROFIBUS Remote I/O

