

# ioLory

RTD, Relay, Analog, Digital, In/Out to LoRa Sensor Node



LoRa is a wireless communication technology for sensor network, a next-generation LPWA(Low Power Wide Area) communication technology that can deliver small amount of data over long distances. ioLory providing Digital Input/Output, Analog Input, RTD and so on, is an ODMU(One-Device-Multi-Use) equipment that provides functions that users want to meet various requirements such as collection, control and monitoring of various measurement equipment, sensors and actuators in industrial sites.

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Specifications subject to change without notice



## Overview

### Wireless Serial Network Construction

Supports wireless(LoRa) transmission and reception of RS-232/485 serial data.

### Provides Various I/O Ports

Digital Input/Output, Analog Input, Relay, RTD ports are provided.

### High Performance and Excellent Reliability

It provides long-distance communication performance of up to 20km based on open field and industrial durability at the same time.

### LoryNet Compatibility

SystemBase's own PLWA platform, LoryNet, is applied, enabling interoperability with the LoryNet product line.

LoRa	Frequency	917 ~ 923MHz
	Transmission Power	Max. 25mW
	Encryption	AES-128
Serial	Serial Port	1 Port DE-9 RS-232 RS485 (TB)
	Speed	Max 921,600bps
	Data bit	8
	Stop bit	1
	Parity bit	None, Even, Odd
	Flow Control	RTS/CTS
	Signals	RS-232: TXD, RXD RS-485: TRXD+, TRXD-

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Communication	Digital Input	Input Voltage Range	10 - 26 VDC
		Input Current	5mA@12VDC 11mA@24VDC
	Digital Output	Maximum Voltage	12 - 36 VDC
		Maximum Current	100mA/Ch
		Vceon	Max. 1.1VDC
	Analog Input		16bit Resolution, 0(4) ~ 20mA, 0(5) ~ 10V
	RTD		Resistance Temperature Detector
	Relay Output	Logic Voltage	25 VDC
		Logic Current	42 mA
		Max. Current	0.5A@220VAC 1A@28VDC
Hardware	Dimension (W x L x H)		101.8 x 82.6 x 26.7mm (4.0 x 3.25 x 1.05in)
	Weight		218.7g (7.71oz)
	Operating Temperature		-40 ~ 85°C (-40 ~ 185°F)
	Humidity		Max 95% R.H
	INPUT Power		DC 12~48V External Battery Connectable
	FIELD Power		DC 12~24V, 2 Contact Points
	LED		RTD, DI2, DO2, 232, LoRa (Yellow), RO, AI, DI1, DO1, RDY, 485 (Green)
Software	Protocol		LoryNet
	Configuration		AT Command, LoRaConfig2
Ordering Information	ioLory-1070MIXTIL		ioLory-1070TIL/MIX, Manual, Wall Mount Bracket

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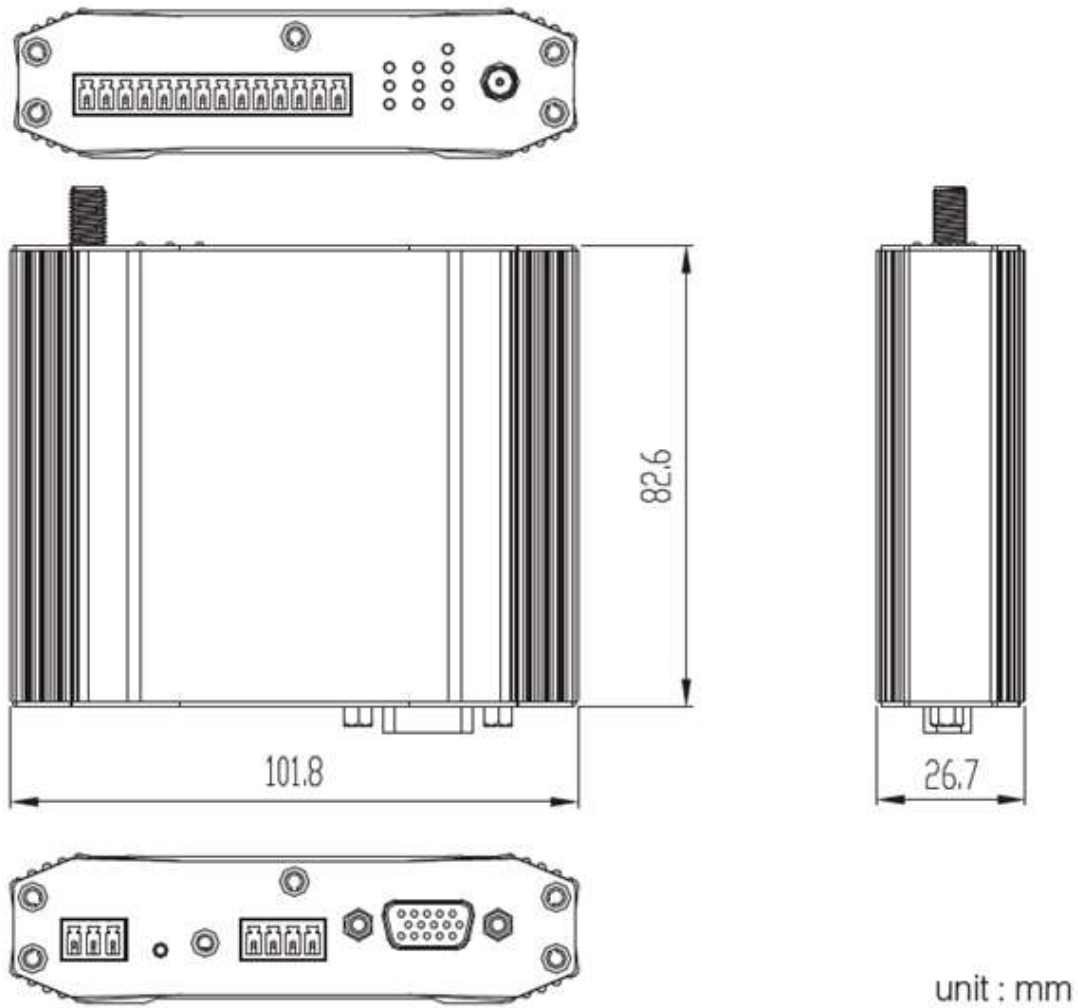
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Dimension



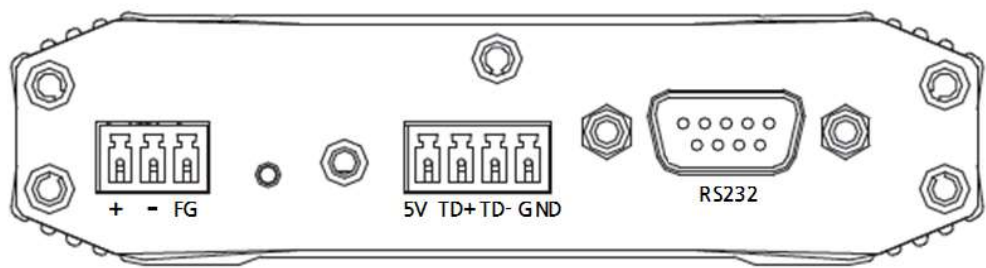
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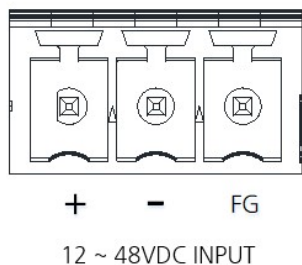
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Pin Assignment



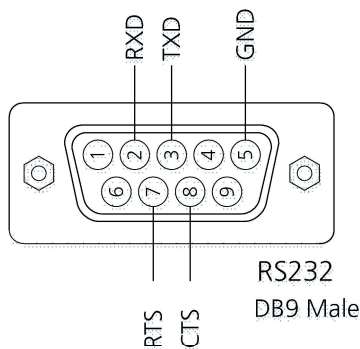
Power Pin Specification



Pin	Description
V+	Power Input
V-	Power Input
FG	Frame Ground

\* Non-polar terminal

RS232 Pin Specification



Pin	Description
RXD	Receive Data
TXD	Transmit Data
GND	Ground
RTS	Request to Send
CTS	Clear to Send

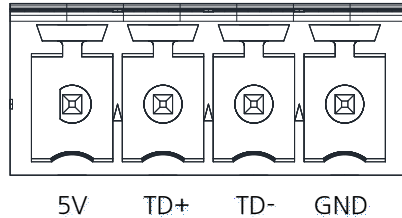
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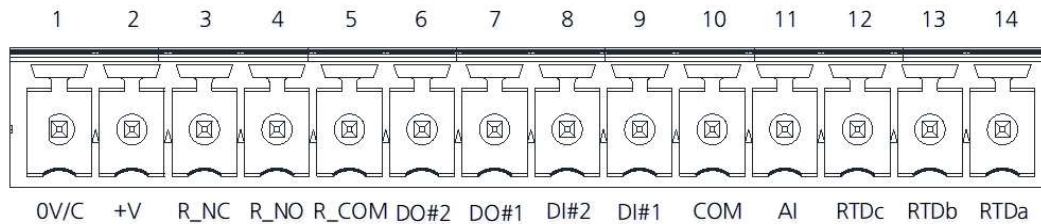


## RS485 Pin Specification



Pin	Description
5V	5V Output (500mA)
TD+	Transmit/Receive Data +
TD-	Transmit/Receive Data -
GND	Signal Ground

## I/O Port Pin Specification



Pin	Description
0V/C	Ground Socket (Field Ground)
+V	12~24VDC Voltage + Socket (12-24VDC)
R_NC	Initial state of Relay(Relay Normally Closed)
R_NO	Operates when changing Relay state (Relay Normally Open)
R_COM	Relay Ground Socket (Relay Common)
DO#1	DO Port no.1 (Digital Output #1)
DO#2	DO Port no.2 (Digital Output #2)
DI#1	DI Port no.1 (Digital Input #1)
DI#2	DI Port no.2 (Digital Input #2)
A_COM	Analog Ground Socket (Analog Common)
AIN	Analog Input Socket (Analog Input)
RTDc	RTD Lo
RTDb	RTD Lo
RTDa	RTD Hi

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