



ORIO-G30218

Wireless Remote IO



Features

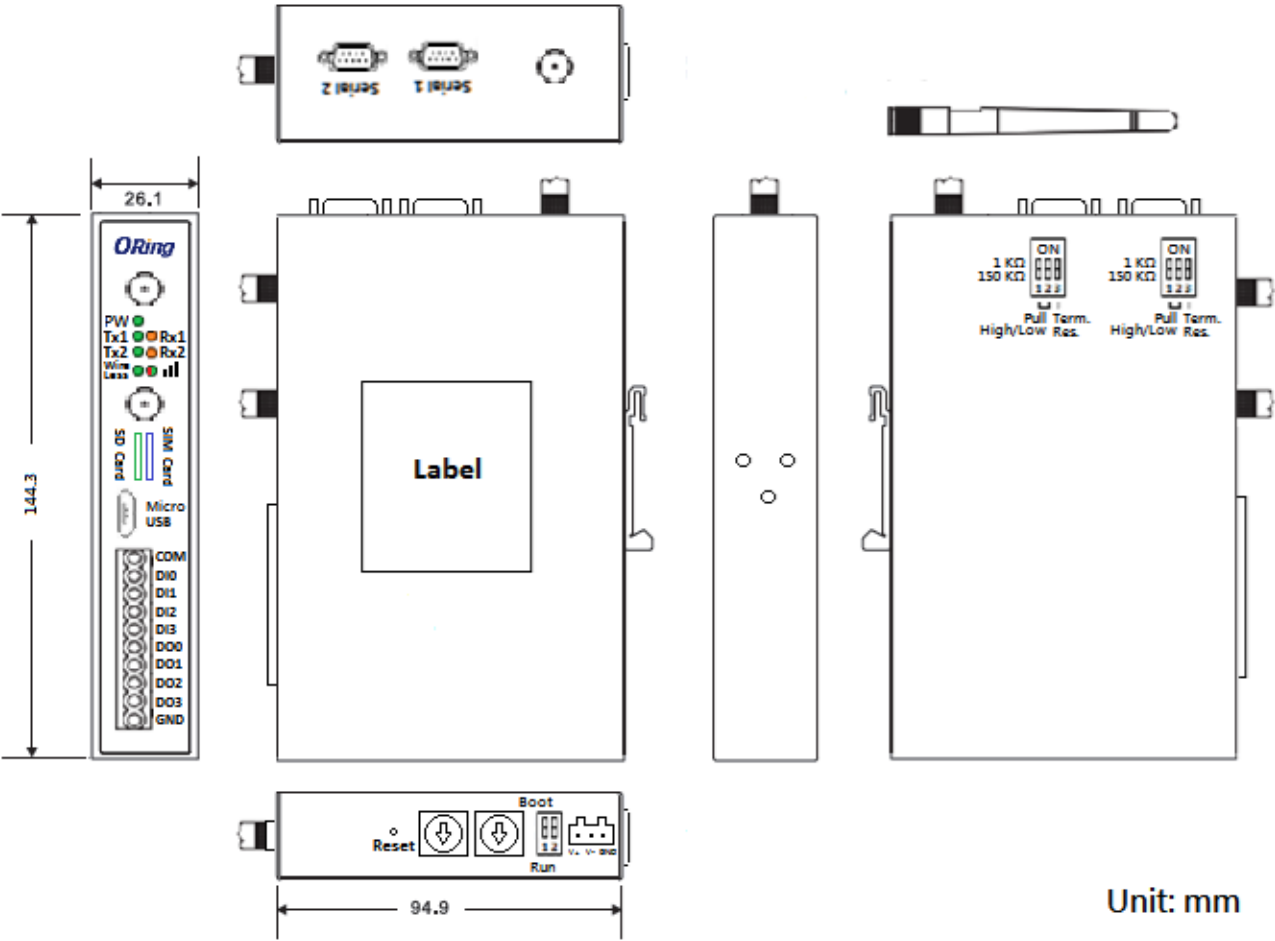
- Support 2 Serial Ports for RS232/RS422/4W-RS485/2W-RS485
- Support NB-IOT/CAT M1/CAT 1/ZigBee/BT (BLE3.0)/LoRa (by model)
- Support 4 Digital inputs (Dry/Wet) / 4 Digital outputs (Sink)
- Support Data Log
- Support Modbus protocol
- Support MQTT/COAP protocol
- Support GPS
- Support configuration via USB virtual com port
- -40 to 75°C wide operating temperature



Introduction

The ORIO-G30218 is an IO device with 4 DI/4 DO and wireless module. The serial port is up to 921.6K baudrate and supports Modbus protocol. ORIO-G30218 has multi-common protocols that help user send data to cloud easily. There are many wireless types could be chosen. It could be a MQTT/Modbus gateway. User can setup the configuration by using USB virtual com port, and update firmware via USB.

Dimension



DIP Switch

1K Ohm
150K Ohm
Pull High/Low
Term. Res.

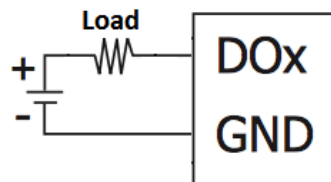
SW No.	Description
# 1	150K / 1K Ohm Pull High/Low Resistor
# 2	
# 3	Enable / Disable Terminal Resistor

Boot
Run

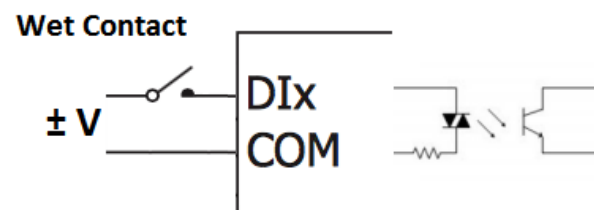
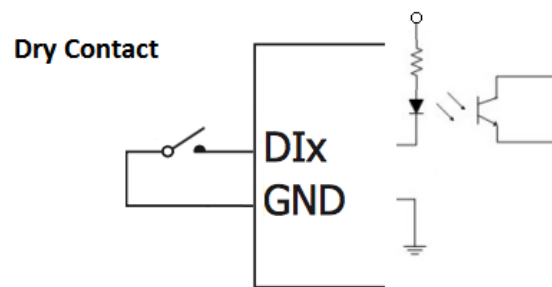
SW No.	Description
# 1	Boot: Boot mode / Run: Normal mode
# 2	Reserved

Wiring

Digital Output



Digital Input



Specifications

ORing Model	ORIO-G30218-XX
Serial Port	
Connector	DB9
Ports	2
Operation Mode	RS232, RS422, 4W-RS485, 2W-RS485
Serial Baud Rate	Up to 921.6Kbps
Data Bits	7, 8, 9
Parity	None, Even, Odd
Stop Bits	1, 1.5, 2
RS-232	TxD, RxD, DCD, DTR, DSR, RTC, CTS, GND
RS-422	Tx-, Tx+, Rx+, Rx-, GND
RS-485	4 wire: Tx-, Tx+, Rx+, Rx-, GND 2 wire: Data-, Data+, GND
Wireless	
NB-IOT	Frequency Band: B5/B8/B20 Output Power: 23dBm Sensitivity: -129dBm AT Command: 3GPP Rel-13 and enhanced AT commands
CAT M1	Frequency Band: B3/B8/B20 Output Power: TBD Sensitivity: TBD AT Command: 3GPP TS27.007, 27.005 and other enhanced AT Commands
CAT 1	Frequency Band: B1/B3/B8/B20/B28 Output Power: TBD Sensitivity: TBD AT Command: Hayes, TS 27.007 and 27.005 and other enhanced AT Commands
ZigBee	Frequency : 2400 MHz Output Power: 20 dBm Sensitivity: TBD
LoRa	Frequency : 915MHz Output Power: 8 dBm Sensitivity: TBD
BT (BLE)	Frequency : 2400 MHz Output Power: 5 dBm Sensitivity: -96 dBm
GPS	Frequency (time pulse signal): 0.25 Hz ... 10 MHz Output Power: TBD Sensitivity: -162 dBm (Tracking & Navigation)

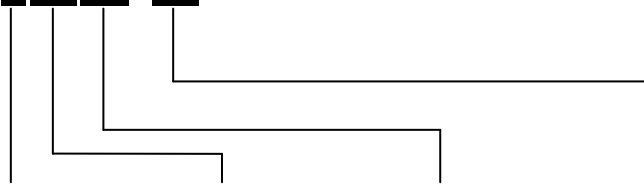
* All enserifications are subject to change without notice

USB	
Connector	Micro USB, Female B type
Ports	1
Function	Update firmware, Configuration
Digital Input	
Sensor Type	Wet Contact (NPN or PNP), Dry Contact
I/O Mode	DI or Event Counter
Port	4
Dry Contact	• On: short to GND • Off: open
Wet Contact (DI to COM)	• On: 10 to 30 VDC • Off: 0 to 3 VDC
Counter Frequency	20 Hz
Digital Filtering Time Interval	Software Configurable
Isolation	3K VDC or 2K Vrms
Digital Output	
Type	Sink
Port	4
I/O Mode	DO or Pulse Output
Over-Voltage Protection	60 VDC
Over-Current Protection	2.6 A
Over-Temperature Shutdown	175°C (typical), 150°C (min.)
Current Rating	200 mA per channel
Isolation	3K VDC or 2K Vrms
LED Indicator	
PW (Power LED)	Green: Power is ready OFF: Power fail
Tx1, Tx2 (Serial TX LED)	Green: Serial port is transmitting data (TX) OFF: Serial port doesn't transmit data (TX)
Rx1, Rx2, (Serial RX LED)	Amber: Serial port is receiving data (RX) OFF: Serial port doesn't receive data (RX)
WireLess (Wireless Signal LED)	Green: Wireless is transmitting/receiving data OFF: Wireless doesn't transmit/receive data
Wireless Strength LED	Green: Wireless Strength >= 75% Amber: Wireless Strength 50 to 75 % Amber with blink: Wireless Strength 25 to 50 % OFF: Wireless Strength < 25%
Power Consumption	
ORIO-30218	Input Voltage: 12 to 48 VDC

	Input Current: TBD@12 VDC, 24 VDC, 48 VDC
Standards and Certification	
EMC	EN 55032/24
EMI	CISPR 22, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV
	IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m
	IEC 61000-4-4 EFT: Power 1 kV; Signal 0.5 kV
	IEC 61000-4-5 Surge Power: 1 kV;
	IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m
Physical Characteristic	
ORIO-G30218	TBD
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 75°C (-40 to 167°F)
Operating Humidity	5% to 95% Non-condensing
Warranty	5 years

Ordering Information

ORIO-GABCDE-FG



Code Definition	Serial Type	Serial port	IO Type	Function rule
Option	1: RS232 2: RS422/485 3 : 3 in 1	02 : 2 Ports	1X : DIO Series 2X : AIO Series 3X : Relay Series 4X : Others	WF : 802.11 a/b/g/n NB : NB-IOT C1 : CAT 1 CM : CAT M1 ZB : ZigBee LR : LoRa C3 : Cellular/LTE BL: BT Low Energy

	Model Name	Description
Available Model	ORIO-G30218-XX	Industrial Wireless IO Device

Packing List

- **ORIO-G30218 x 1**