WISE-4210
Industrial LPWAN SUB-G Wireless I/O Module
Startup Manual

Overview

Thank you for purchasing the WISE-4210 module. This quick start guide is intended to help you deploy your new module. The guide contains basic information on the power and application wiring.

Should you require additional instructions, please refer to the user manual.

Input Power Requirements

The WISE-4210 is designed for a standard industrial unregulated 24 V_{DC} power supply. For some applications, it can also accept +10 to +50 V_{DC} power input with 200 mV peak-to-peak power ripple. The immediate ripple voltage should be between +10 and +50 V_{DC}. Batteries may also be used as an alternative power source.

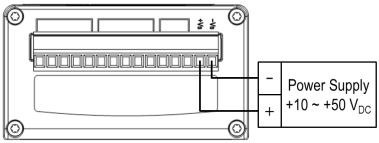
Packaging List

- 1 x WISE-4210 module
- 1 x Mounting bracket
- 1 x Quick start manual
- 1 x China RoHS declaration (UA series only)
- 1 x Antenna (UA series only)*

*For NA series, antennas should be ordered respectively per required frequency range.

** WISE-S200 I/O module should be ordered respectively.

Power Supply Wiring



For more information on this and other Advantech products, please visit our website at:

http://www.advantech.com

For technical support and service:

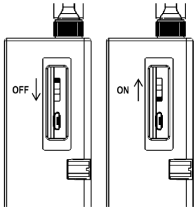
https://www.advantech.com/support/

This startup manual is for WISE-4210.

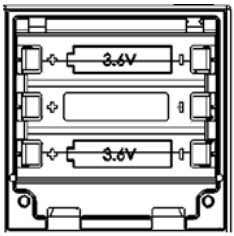
Part No. 2003421052 Edition 3
Printed in Taiwan October 2019

Battery

Open the rubber cover on the side of WISE-4210 nodes, there is a battery switch to turn on or turn off the battery power supply.



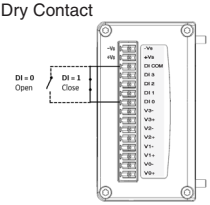
The module accepts 3 x AA, 3.6 V lithium battery. The batteries should be installed facing the same direction.



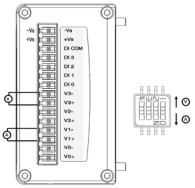
Application Wiring

WISE-S214 (4AI/4DI)

Digital Input- Dry Contact

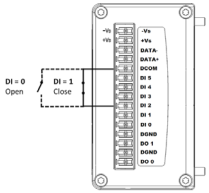


Analog Input

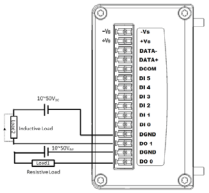


WISE-S250 (6DI/2DO/1RS-485)

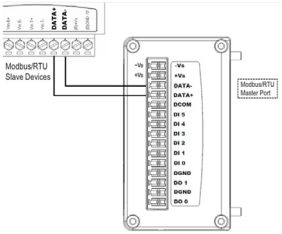
Digital Input-Dry Contact



Digital Output

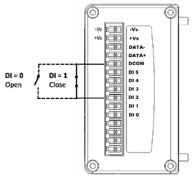


RS-485 Port

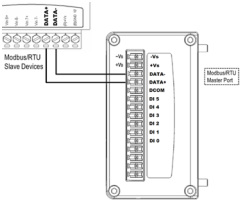


WISE-S251 (6DI/1RS-485)

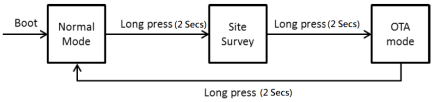
Digital Input – Dry Contact



RS-485 Port



Membrane Button



	Mode	Light Press (0.5 Sec)	Long Press (2 Secs)
Normal Mode	Power Saving Mode	LED turn on→Get battery level→LED turn off*	Leave normal mode
	Non-power saving Mode	Get battery level→LED turn off*	Leave normal mode

	Light Press (0.5 Sec)	Long Press (2 Secs)
Site-Survey Mode	Tx site survey packet	Leave site survey mode

	Status	Light Press (0.5 Sec)	Long Press (2 Secs)
OTA Mode	Rx Status	Read battery level	Leave OTA mode
	Tx Status (by USB port)	Tx Configuration	Tx Firmware
	Low Battery	NA	Leave OTA mode
	Update FW fail	Reset OTA mode	NA

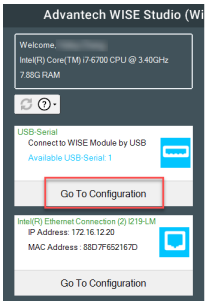
*LED indicators will go off automatically 15 secs later when using battery power.

Notes

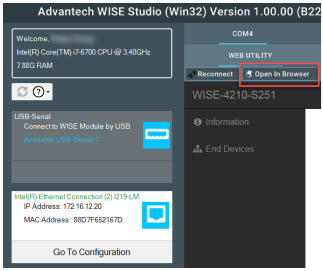
1. Please install the CP210x USB to UART Controller driver: https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers.
2. The power from USB is not sufficient to power WISE-4210 module. Please plug in a DC power source from +Vs and -Vs pin.

Quick Start

1. Plug in a DC power source to the +Vs and -Vs pins of your module or insert charged batteries.
2. Connect the module to your computer via the micro-USB port.
3. Open WISE Studio and press **Go To Configuration**

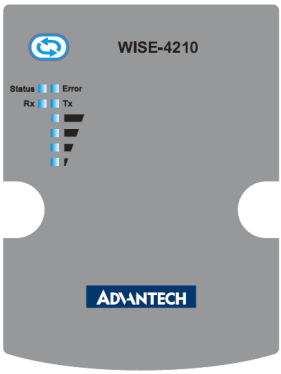


4. Click **Connect** to link WISE-4210 - the web configuration page will appear.
5. Use the web configuration in WISE Utility or press **Open In Browser** to open the web configuration page in any browser (Google Chrome is recommended).



6. Click **Information** to check the status of the module or to configure the module.

LED Indicators



	Indication (Green)	Percentage
Battery Level Battery PN: 1760002647-01	4	100%
	3	100~50%
	2	50~30%
	1	30~0%

LED	Color	Indication	Behavior
Status	Green	Blink	2 Hz: Initial Status 0.5 Hz: Node is connected and normally at work. (Automatically go OFF after 15 seconds when battery power is used.)
		On	Site Survey mode
		OFF	OTA mode (RF RX or RF TX on)
RF RX	Green	On(at least 10 ms)	Receiving data from the Gateway
		On	Listen RF channel
		Off	Idle
RF TX	Yellow	On(at least 10 ms)	Sending data to the Gateway (Automatically be disabled after 15 seconds when battery power is used.)
		Off	Idle
Error	Red	Fast Blink	• I/O Error • OTA Fail • TX/RX Firmware fail in OTA
		Slow Blink	• Low battery voltage • Low RTC battery voltage
		Off	No error
Signal 4	Green	Fast Blink	• RF related error
Signal 3	Green	Fast Blink	• IO error
Signal Strength	Green	On * 4	• Full signal (In site survy mode) • Battery level (100%) (Automatically go OFF after 15 seconds when battery power is used.)
		On * 3	• Good signal (In site survy mode) • Battery level (100~50%) (same as above)
		On * 2	• Okay signal • Battery level (50~30%) (same as above)
		On * 1	• Poor signal • Battery level (30~0%) (same as above)
		All Off	• No signal • Battery level (0%)