

Advantech AE Technical Share Document

Date	20190320	SR#	1-3699904999
Category	<input type="checkbox"/> FAQ <input checked="" type="checkbox"/> SOP	Related OS	N/A
Abstract	How to connect WISE-4210-AP with end nodes?		
Keyword	WISE, WISE-4210, LPWAN,		
Related Product	WISE-40XX series, WISE-42XX, WISE-44XX		

■ **Problem Description:**

This document shows that how to connect WISE-4210-AP with WISE-4210-Sxx end nodes, and query data result.

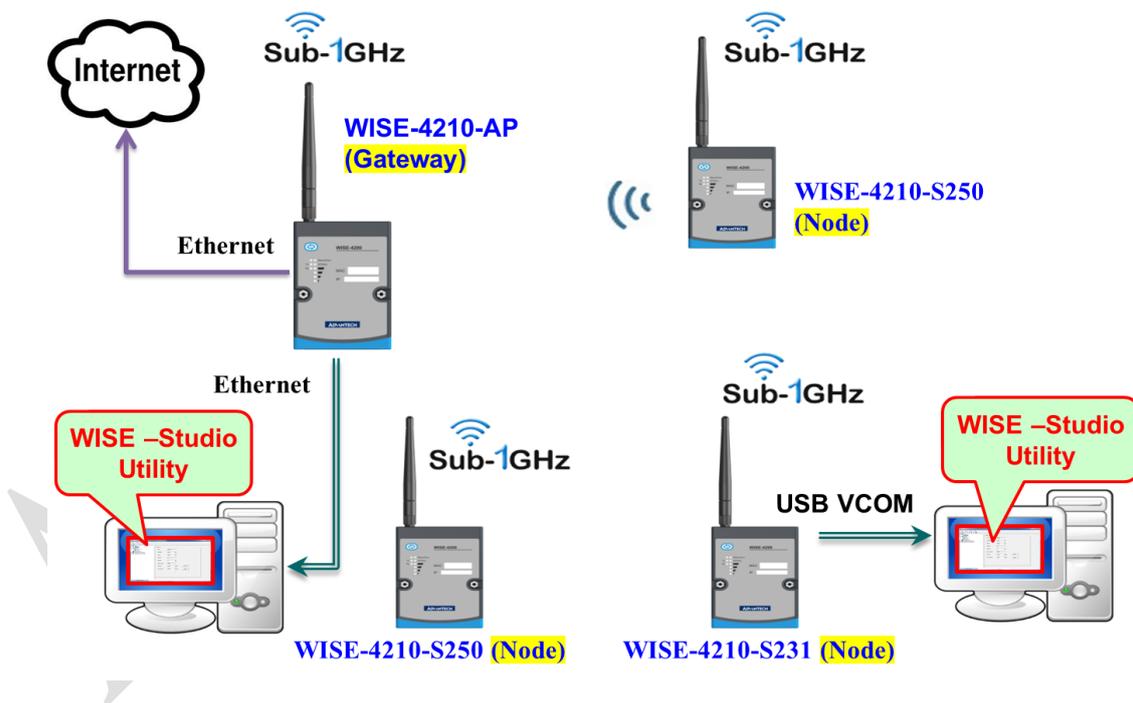


Figure 1. The topology for WISE-4210 series.

■ **Brief Solution - Step by Step:**

SOP video: <https://bit.ly/2TK9ww7>

NOTATION: Please make sure the AP and all of end nodes are using **matching** firmware **version**.

WISE-4210NA series Firmware

Solution : Firmware for WISE-4210 NA series.

※ Do not downgrade FW from vA102BXX to vA101Bxx.

※ The AP and end nodes should use the matching FW version for communication. Please upgrade them at the same time.

Figure 2. The execute path are pre-defined.

Step1. Install WISE Studio and USB driver. Power on the WISE-4210 module, and connect a USB cable with it.

Link for Studio: <https://bit.ly/2TLFiIW>

Link for driver: <https://bit.ly/2CoKF5Z>

Note that USB cable does **not** provide the power for a module.

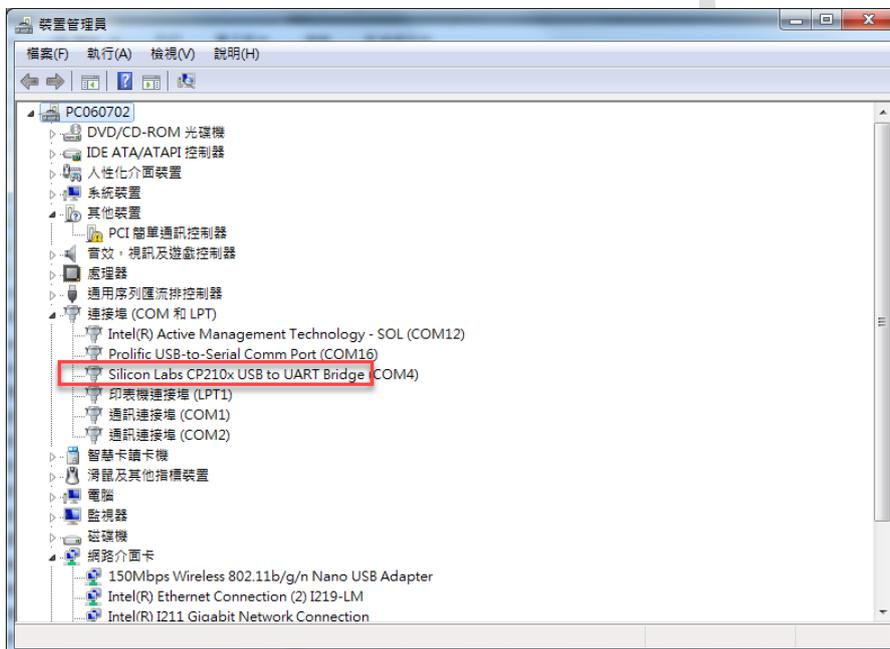


Figure 3. The OS can recognize the WISE module through a USB cable after installed the driver.

Step 2. Click on “go to configuration” under USB-serial tab.

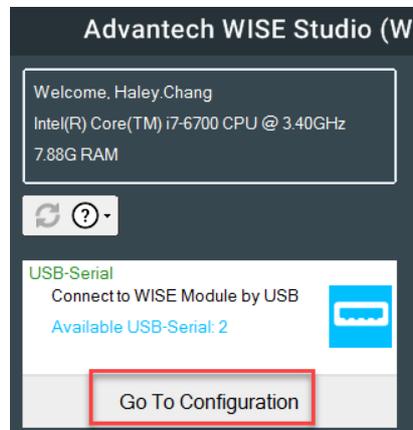


Figure 4. Configuration

Step 3. Click on “connect” according to the COM port number you are using.

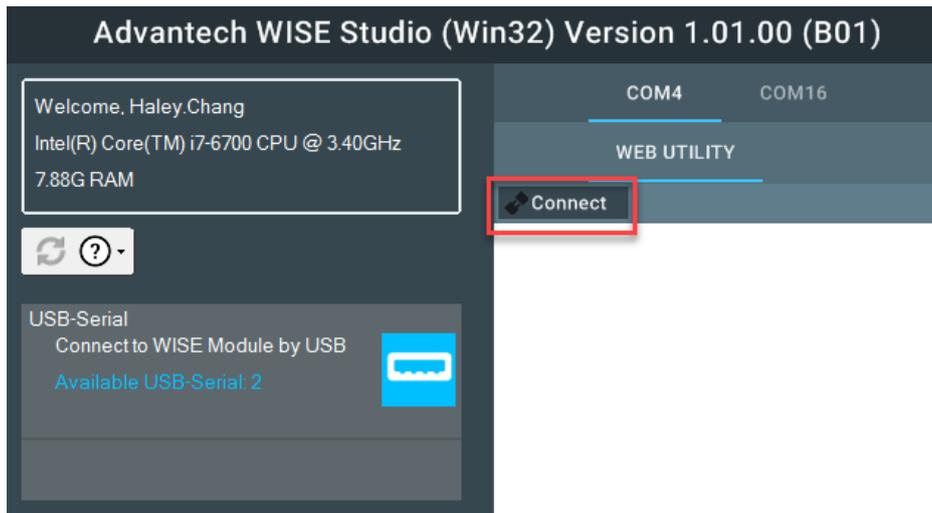


Figure 5. Connect.

Step 4. Check if the firmware version of AP and end nodes are matching (figure 6). If not, please upgrade the firmware to match with each other.

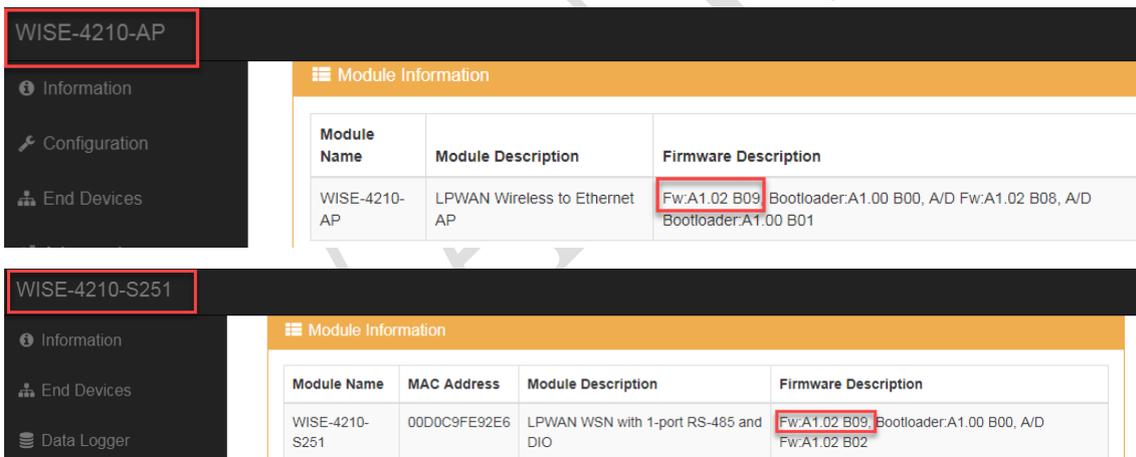


Figure 6. Firmware version.

Step 5. Go to “RF module” tab and set up the frequency, data rate, and based band. AP and end nodes need to set up using the same parameters (figure 7).

Note that the end nodes **broadcast** data. AP receives them all as default setting. If a user want to resist the AP to collect data from some specific end nodes, the setting is in “access control” page (figure 8).

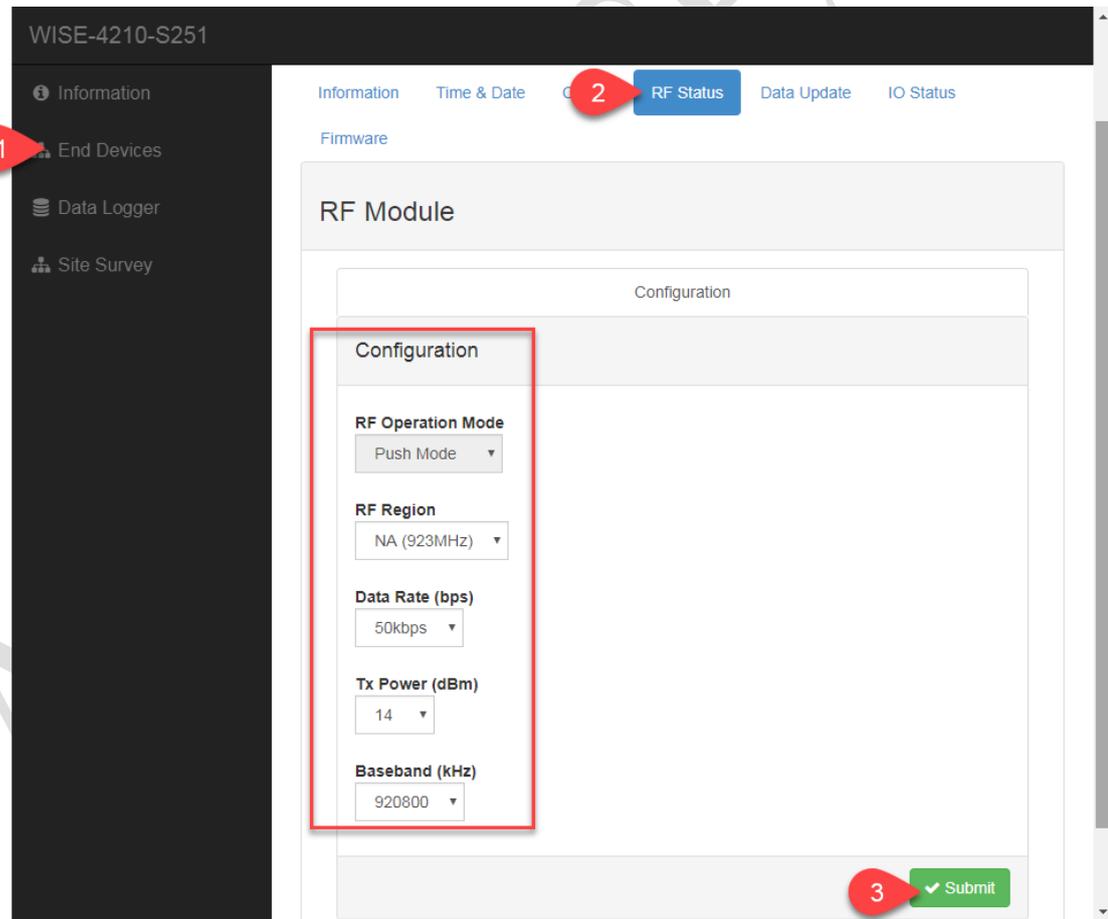
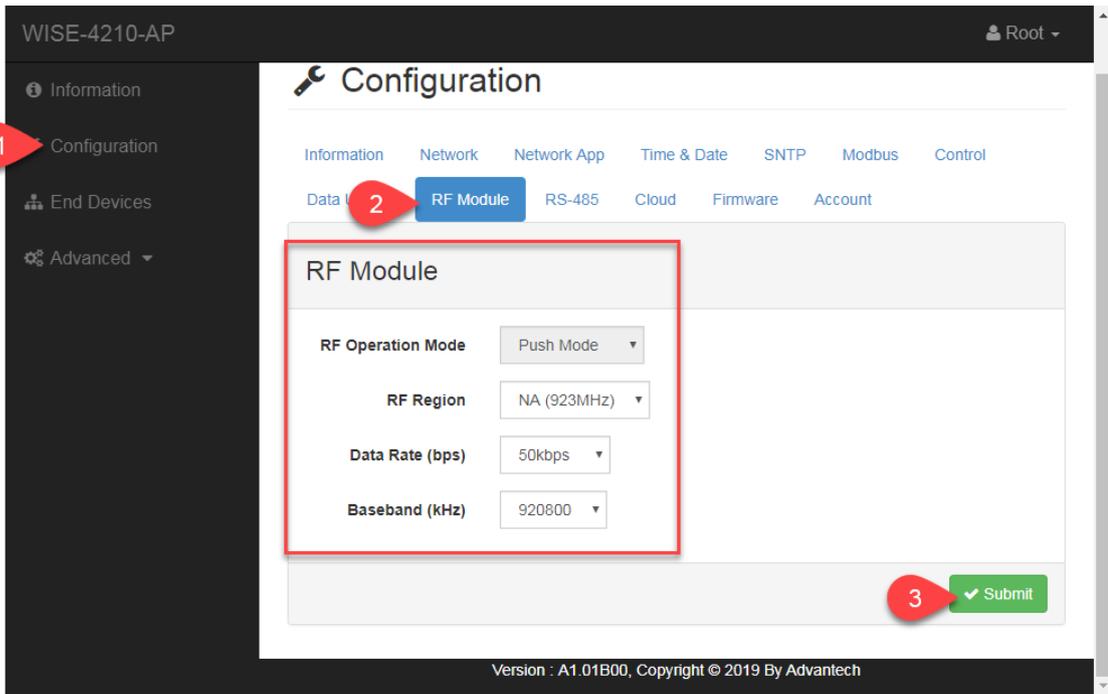


Figure 7. The RF module setting page.

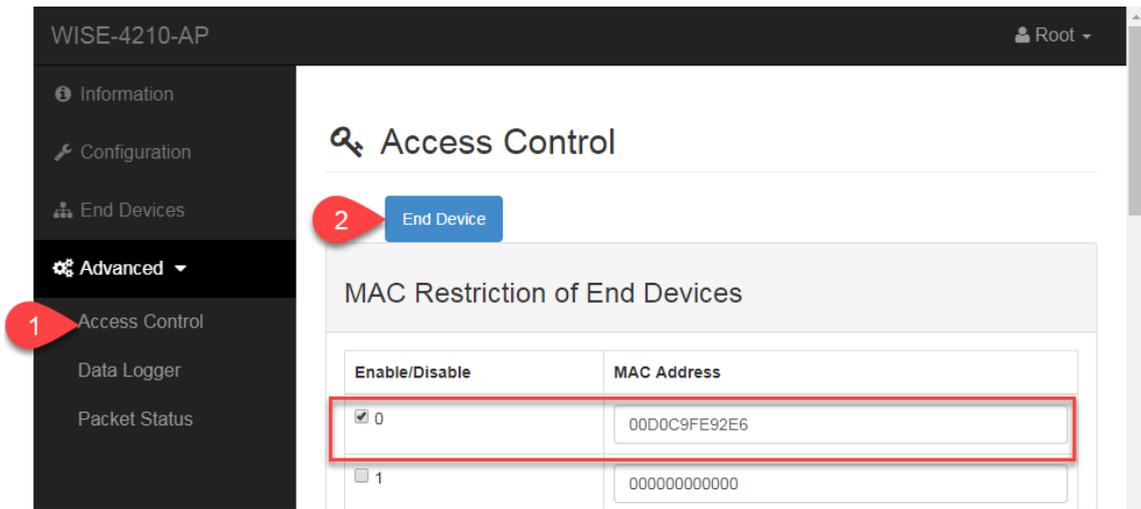


Figure 8. Resist the data that AP collects.

Step 6. Data will be broadcasted according to interval setting or change of status.

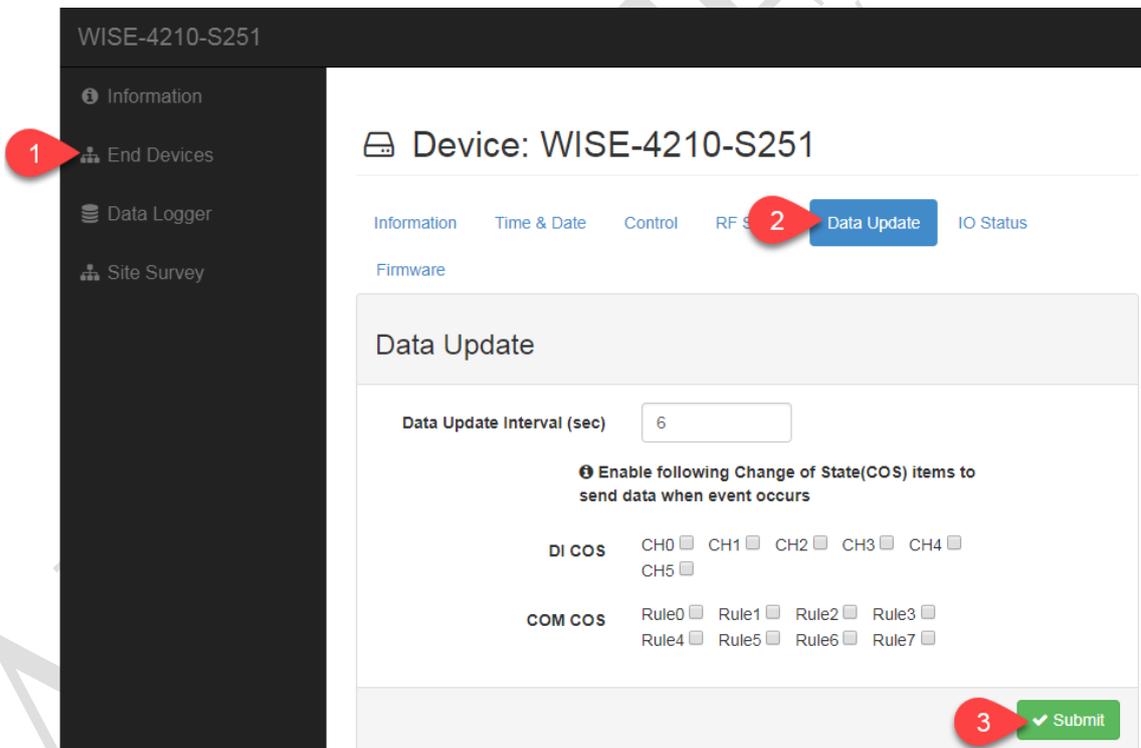


Figure 9. Data update interval.

Results of receiving data.

Monitor the data while WISE-4210-S2xx is pushing data to a WISE-4210-AP.

1. Inactive time.

On the page of “end device list” on an AP, there is “inactive time” column to show that when is the last time the AP received data from an end device.

– Unit: second

WISE-4210-AP Root ▾

Information
Configuration
1 End Devices
Advanced ▾

End Device List Edit Mode

List 16 entries

MAC Address	Modbus ID	RSSI	Inactive Time	Battery Status	Battery Level	RTC Battery Status	Power Source	Device Status
00D0C9FD7D35	1	0	0	No Error	0.000 V	Low battery	No Data	Inactive
00D0C9FE92E9	2	0	0	No Error	0.000 V	Low battery	No Data	Inactive
00D0C9FE92E2	3	0	0	No Error	0.000 V	Low battery	No Data	Inactive
00D0C9FE92E6	4	-16	3	No Error	0.000 V	No Error	Line power	Active

Showing 1 to 4 of 4 entries Previous 1 Next

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Figure 10. Inactive time.

2. Query.

The WISE-4210-AP module **does not store data in local memory**. There is only the latest one. Go to “data logger” page, and query the data according to the MAC address.

FAQ: What is the JSON format of I/O log of WISE modules?

<https://bit.ly/2U021QN>

WISE-4210-AP

Information
Configuration
End Devices
Advanced ▾
Access Control
1 Data Logger
Packet Status

Data Logger

Data Configuration Logger Config 2 Local Data Query

3 Push Data Query System Data Query

Push Data Query Format ▾

UUID Enabled/Disabled

Timestamp Local Date and Time(GMT) ▾

Query Filter ▾

Current Total Amount

Timestamp of the Oldest

Timestamp of the Latest

End Device MAC Address

4 Query

Figure 11. Query.