

Advantech AE Technical Share Document

Date	2021/12/23	SR#	1-4022934612
Category	■FAQ □SOP	Related OS	N/A
Abstract	Why Modbus client is unable to read WISE-2410 data on WISE-6610 Modbus Server?		
Keyword	WISE, LoRaWAN, vibration, build-in sensor, Modbus data		
Related Product	WISE-2410 series, WISE-4610 series		

■ **Problem Description:**

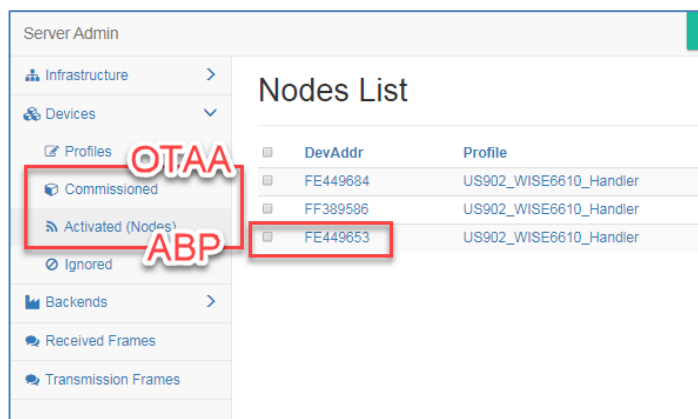
This document shows how to troubleshooting for Modbus retrieving data. Why cannot retrieve data correctly? What went wrong?



Figure 1. Topology of this scenario.

■ **Brief Solution - Step by Step:**

- Step 1. Use an USB cable to connect WISE-2410 and a computer. **Have to be USB cable!**
- Step 2. Make sure the module is added into communication node list.



Step 3. Make sure the frame packets can be received by a gateway.

Server Admin

- Infrastructure >
- Devices >
 - Profiles
 - Commissioned
 - Activated (Nodes)
 - Ignored
- Backends >
 - Received Frames**
 - Transmission Frames

Received Frames

Received	Application	DevAddr	MAC	U/L RSSI	U/L SNR	FCnt	Confirm	Port	Data
2019-12-12 10:22:51	WISE6610_Handler	FE449653	74FE48FFFE436CDF	-47	11.8	204	✘	1	80CC2D50060000E0620000
2019-12-12 10:22:47	WISE6610_Handler	FE449653	74FE48FFFE436CDF	-48	11.2	202	✘	1	00CA001A00601B00010000
2019-12-12 10:22:38	WISE6610_Handler	FE449653	74FE48FFFE436CDF	-45	10.2	198	✘	1	80C62D50060000E0620000
2019-12-12 10:22:33	WISE6610_Handler	FE449653	74FE48FFFE436CDF	-45	10	196	✘	1	00C4601B00010000A8D389

Step 4. Make sure the gateway WISE-6610 can parsing the data from the end node. If cannot, please check the “App Arguments” setting.

Navigation

- Router
 - LoRaWAN Radio
 - Network Server
 - MQTT
 - Application Server
 - Settings
 - Status
 - Modbus Mapping Table
 - Payload Engine
 - Licenses
 - Return to Router

DevAddr: FE449653

Sensor PowerSrc Battery Voltage

Device 1 0

Sensor Range Status Event SenVal SenMaxVal SenMinVal

TempHumi 0 0 0 26062 0 0

Sensor SenEvent OAVelocity Peakmg RMSmg Kurtosis CrestFactor Skewness Deviation

X-Axis 0 201 54 38 0 0 0 0

Y-Axis 0 167 66 47 0 0 0 0

Z-Axis 0 503 78 55 0 0 0 0

Return

Server Admin

- Infrastructure >
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 - Activated (Nodes)
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- Backends >
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 - Transmission Frames

Edit node #FE449653

General ADR Status

DevAddr * FE449653

Profile * US902_WISE6610_Handler

App Arguments WISE-2410

NwkSKey * 0011

AppSKey * 0011

Step 5. Make sure the Modbus server is enabled.

The screenshot shows the 'Modbus TCP Server' configuration section. The 'Application Server Enable' dropdown is set to 'On'. The 'Modbus TCP Server' dropdown is also set to 'On'. The 'Modbus TCP Server Port' is set to 502. The 'Modbus Timeout' is set to 2. The 'SD Card Logging' is set to 'Off'. Red callouts 1, 2, 3, and 4 point to the 'Application Server', 'Modbus Mapping Table', 'Modbus TCP Server', and 'Modbus TCP Server Port' fields respectively.

Step 6. Make sure "restart application" action is made after the end node is added into Modbus table on the gateway.

The screenshot shows the 'Modbus Mapping Table' with two entries. The 'Action' column for the second entry has a 'Restart Application' button. Red callouts 1, 2, and 3 point to the 'Application Server', 'Modbus Mapping Table', and the 'Restart Application' button respectively.

Request Slave ID	Node ID	Type	Action
1	FF389586	Class A	Delete
2	FE449653	Class A	Delete

Step 7. Make sure the Modbus ID and the addresses are correct on Modbus client.

The screenshot shows the 'Modbus Mapping Table' with a red box around the 'Request Slave ID' 2. A browser window shows a table of Modbus registers with a red box around the 'Address 4X' column. The ModScan32 software interface shows the 'Device ID' set to 2 and the 'Address' set to 0501. Red callouts and arrows indicate the mapping between the gateway settings, the browser table, and the ModScan32 software.

Sensor	Accelerometer	Axis	3					
Address 0X	Ch	Description	Attribute	Address 4X	Ch	Description	Attribute	
00231	0 (X)	Accelerometer High Alarm Flag	Read	40501	0 (X)	OA Value of Vibration Velocity (0.01 mm/sec)	Read	
00232	1 (Y)		Read	40502	1 (Y)		Read	
00233	2 (Z)		Read	40503	2 (Z)		Read	
00234	3 (Tempe)	Temperature High Alarm Flag	Read	40504	3 (Tempe)	Temperature Value	Read	
				Read	40621	0 (X)	Sensor Range Code	Read
				Read	40622	1 (Y)		Read
				Read	40623	2 (Z)		Read