LoRaWAN Sensor (TAG07/07B) Configuration Manual V2.2

1. USB RS232 Cable



Please use the RS232 special configuration cable which is provided by our company to connect the computer to configure the sensor.

2. Steps

1) PL-2303 driver is for RS232 configuration cable,



Please install

in windows systems

(XP/Vista/Win7/Win8/Win10)

- 2) Connect the configuration cable to the computer.
- 3) After the device is installed successfully, return to the desktop, select "My Computer"-> right-click -> choose "Manager"-> "System Tools" -> "Device

Manager" -> "Ports", and you will find the port which configuration cable is

connected. Prolific USB-to-Serial Comm Port (COM3)



3. Configure Software

- 1) Connect the Sensor to computer through the RS232 configuration cable.
- 2) Run the configuration software * Sensor Configuration Software.exe



3) Connection

A.Confirm that the switch of the sensor is on, if it is on, press and hold the button for 3 seconds until the green light is always on , and then click "Connect";

B. Confirm that the switch of the sensor is on, if it is off, turn it to on first, wait for the light off, and then press and hold the button for 3 seconds until the green light is always, and then click "Connect";

After successful connection, the following image interface will appear (If the sensor is not operated within 1 minute and the green light is off, the sensor will automatically disconnect, and you need to click "connect" again before you can continue to configure the sensor).

sensor Configuration Software v1.0.14	- 🗆 X
Device Setting	
Device Info Device Support Device : TAG07/TAG07B/TAG08/TAG08 Reading device parameters	rmation a [D: 383837377530520E Type: TAG07B(LORAWAN_CN470) a Ver: 5.01 trefes, use USB cable to connect, press the button for Sreen Light on, then click Connect; rests the button for Sreen Light to connect. Green Light to fr, smallcally disconnected; refes, use USB cable to connect, or en Light to ff, smallcally disconnected; refes, use USB cable to connect. Green Light to ff, smallcally disconnected; refes, use USB cable to connect. Streen Light off, smallcally disconnected; reference: re

4) Setting

After successful connection, the sensor will automatically change to the setting interface:

Sensor Configuration Software v1.0.18			×
Device Setting			
APPEUI: 545A4C5208170101			1
12(Set APPKEY)			
APPKEY: 287E151628AED2A6ABF7158809CF4F3A		_	
02(Setting the interval for sending data)			
Data sending/storage interval: 10 Minute		_	
05(EU <u>8</u> 68 frequnency)		_	
Channel1: 868100000			
Channel2: 868300000			
Channel3: 868500000			
Data receiving channel: 869525000			
42(Setting the Temp&RH calibration)			
Enable:			
Temperature range: 1 °C Humidity range: 0	%		- 1
Other			~
Read	ave		
Ready	COM3,9600	Debug M	ode

Set APPEUI (11)

APPEUI:16byte,default:545A4C5208170101

Set APPKEY(12)

APPEUI:32byte,default:2B7E151628AED2A6ABF7158809CF4F3A

Setting the interval for sending data(02)

Data sending/storage interval: The Sensor data transmission interval X:[1,1440], Unit:Min,default:15

CN470(05)

Channel 1~8:default:0,1,2,3,4,5,6,7 Data receiving channel:default:50530000Hz

CN868(05)

Channel 1:default:868100000 Channel 1:default:868300000 Channel 1:default:868500000 Data receiving channel:default:869525000

SSetting Temp&RH calibration (42)

TAG07_LORAWAN:

Enable: enable temperature calibration function **Temperature range:** If the calibration value is added to the temperature, it begins with +; If the calibration value is reduction to the temperature, it begins with -; Can support to one decimal point, unit: °C

TAG07B_LORAWAN:

Enable: enable temperature calibration function

Temperature range:

If the calibration value is added to the temperature, it begins with +; If the calibration value is reduction to the temperature, it begins with -; Can support to one decimal point, unit: °C

Humidity range:

If the calibration value is added to the humidity, it begins with +; If the calibration value is reduction to the humidity, it begins with -; Can support to one decimal point, unit: %

Others

Export device log data: The recorded data can be saved and exported to a CSV file via click and the data will be automatically cleared after exporting.Clear device log data: Click to delete the data recorded of the sensorReset: click and reset the sensorRead: click and read all the parameters of the sensorSave: click and save all the parameters of the sensor

Debug mode

In debugging mode, sensor parameters can be configured and sensor logs can be viewed by commands.

1) Click to enter debug mode:

Sensor C	onfiguration Softwa	re v1.0.18	<u></u>		×
Device	Setting				
	APPEUI:	545A4C5208170101			^
	12(Set APPKEY)				
	APPKEY:	2B7E151628AED2A6ABF7158809CF4F3A			
	02(Setting the int	erval for sending data)			
	Data sending/s	storage interval: 10 Minute			
	05(EU <u>8</u> 68 freque	ency)			
	Channel1:	868100000			
	Channel2:	868300000			
	Channel3:	868500000			
	Data receiving	channel: 869525000			
	42(Setting the Te	mp&RH calibration)			
	Enable:	V			
	Temperature r	ange: 1 °C Humidity range: 0 %			
	Other				~
		Read Save		÷.	
Ready		COM3.96	00	Debug N	ode

2) In debug mode, the sensor parameters are configured directly by commands.

Note: After writing the commands, please click "send". After sending, please write #DS to save the setting(Please refer to the command list for more detailed).

Sensor Configuration Software v1.0.4				
Device Setting				
Debug Mode	Log file address:	F:\/小林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configur	ation Software <u>v</u> 1.
				*
*02.1#				
*02,1#				
CMD:2				
CMD:2				
Per:1				
Per:1				
CMD OK				
CMD OK				
				*
Commands ~02,1#		Sending		Pause
Ready			COM4,9600	Exit debug mode
Sensor Configuration Software v1.0.4				
 Sensor Configuration Software v1.0.4 Device Setting 				
 Sensor Configuration Software v1.0.4 Device Setting Debug Mode 	Log file address:	F:\//林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configur	ration Softwarey1.
Sensor Configuration Software v1.0.4 Device Setting Debug Mode Long Key!!	Log file address:	F:\/Jv林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Softwarev1.
Sensor Configuration Software v1.0.4 Setting Debug Mode Long Key!! Long Key!!	Log file address:	F:\/Jv林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Software <u>v</u> 1.
 Sensor Configuration Software v1.0.4 Sensor Configuration Software v1.0.4 Debug Mode Long Key!! Long Key!! Into Configure Mode!! 	Log file address:	F:\小林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Software <u>v</u> 1.
 Sensor Configuration Software v1.0.4 Senting Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! 	Log file address:	F:\小林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configur	ration Softwarey1.
 Sensor Configuration Software v1.0.4 Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! 	Log file address:	F:\/\林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Softwarey1.
 Sensor Configuration Software v1.0.4 Sensor Configuration Software v1.0.4 Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! 	Log file address:	F:\小林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Software <u>v</u> 1.
Sensor Configuration Software v1.0.4 Orbug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save	Log file address:	F:\/小林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configur	ation Softwarey1.
Sensor Configuration Software v1.0.4 Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save Save CMD OK	Log file address:	F:\/Jv林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Softwarey1.
Sensor Configuration Software v1.0.4 Sensor Configuration Software v1.0.4 Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save Save CMD OK CMD OK	Log file address:	F:\小林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Software <u>v</u> 1.
 Sensor Configuration Software v1.0.4 Setting Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save CMD OK CMD OK 	Log file address:	F:\/小林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configur	ation Softwarey1.
Sensor Configuration Software v1.0.4 Setting Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save Save CMD OK CMD OK	Log file address:	F:\/J\林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ration Softwarev1.
Sensor Configuration Software v1.0.4 Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save CMD OK CMD OK	Log file address:	F:\/Jv林\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Softwarev1.
 Sensor Configuration Software v1.0.4 Pebug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save CMD OK CMD OK 	Log file address:	F:\/小林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configur	ation Softwarev1.
 Sensor Configuration Software v1.0.4 Setting Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save CMD OK 	Log file address:	F:\/\\林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configur	ration Software <u>v</u> 1.
Sensor Configuration Software v1.0.4 Debug Mode Long Key!! Long Key!! Into Configure Mode!! Into Configure Mode!! Save Save CMD OK CMD OK CMD OK Cmmands #DS	Log file address:	F:\/J城\TAG07\配置软件\新版本配置软件\V:	1.0.4\Sensor Configur	ation Softwarey1.

3) View the sensor log in debug mode

After 1 minute, the sensor will exit the configuration mode and enter the sensor log mode. Machine data can be viewed, and log reports are stored in the log file.

Sensor Configuration Software v1.0.4		
Device Setting		
Debug Mode	Log file address:	F:\小林\TAG07\配置软件\新版本配置软件\V1.0.4\Sensor Configuration Software <u>v</u> 1.
6A 9A 6A 9A		
Out Queue!!		
Out Queue!!		
1 00 08 01 40 00 08 01 00		
1 00 08 01 40 00 08 01 00		
00000000_2021/01/05 10:59:07_00_22.4C_43%_3	3.45V	
00000000_2021/01/05 10:59:07_00_22.4C_43%_3	3.45V	
TX:7E 00 00 00 00 00 C3 00 E0 2B 4C 03		
TX:7E 00 00 00 00 00 C3 00 E0 2B 4C 03		
Tx Done		
Tx Done		
		E
Long Key!!		
Long Kevil		*
Commands #DS		Sending Pause
Ready		COM4,9600 Exit debug mode

4) Click to exit debug mode

Click to exit debugging mode to return to the home page, If the sensor green light is off, it is necessary to click "disconnect" and press the button again for 3 seconds. Click the connect when the green light is always on.

Sensor Configuration	n Software v1.0.4				
Device Setting					
Debug Mode		Log file address:	F:\小林\TAG07\配置软件\新版本配置软件\V	1.0.4\Sensor Configu	ration Software <u>v</u> 1.
6A 9A 6A 9A					•
Out Queue!!					
Out Queue!!					
1 00 08 01 40 00 08	01 00				
1 00 08 01 40 00 08	01 00				
00000000_2021/01/0	05 10:59:07_00_22.4C_43%_3.45V				
00000000_2021/01/0	05 10:59:07_00_22.4C_43%_3.45V				
TX:7E 00 00 00 00 00	0 C3 00 E0 2B 4C 03				
TX:7E 00 00 00 00 00	C3 00 E0 2B 4C 03				
Tx Done					
Tx Done					
					E
Long Key!!					
Long Kevil					-
Commands	#DS		Sending		Pause
Ready				COM4,9600	Exit debug mode

Note: The sensor can only be configured when the green light is always on. The sensor cannot be configured after the green light is off.

DFU

can use the configuration software to upgrade the device firmware

1) Select the bin file and click "Start".

🌸 Sensor Config	guration Software v1.1	0		<u>9423</u>		×
Device S	Setting DFU	Exit				
		Device Firmware U	Jpgrade			
	Upgrade File:	C:\Users\lisa\Downloads\tag08B_TR78M_LoRa_Stand	dard_V2.16.bin			
	Tips:Don't close th	program or disconnect the device during the upgrade. Al	fter the upgrade is complete, wait for the device to			
leady			COM3,9600		Debug N	lode
) Firmwar	e upgrade.					
Sensor Config	juration Software v1.1	D		8000		×
Device S	Setting	Exit				

Device Firmware Upgrade

66% Tips:Don't close the program or disconnect the device during the upgrade. After the upgrade is complete, wait for the device to restart before connecting to it.

C:\Users\lisa\Downloads\tag08B_TR78M_LoRa_Standard_V2.16.bin

Start

COM3,115200

Debug Mode

Device Firmware Upgrade

3) Device firmware upgrade successfully.

Upgrade File:

Sensor Configuration Software v1.1.30		9 <u>10</u> 9		×
Device Setting DFU Exit				
Upgrade File: C:UsersVisa Device firmware upgrade successfully! 200% Tips:Don't close the program or disconnect the device during the upgrade. After the upgrade is complete, wait for restart before connecting to it.	Start			
Device Firmware Upgrade	COM3,115200	D	ebug Mo	/de

4) If the device cannot be connected or upgraded due to any abnormal operation during the upgrade, please contact us.