Offline configuration for Sigfox Sensors

THIS IS **OBSOLETE** MANUAL

Please access https://www.iot.daviteq.com/wireless-sensors for updated manual

Instructions for offline configuration of the Daviteq Sigfox-Ready sensors. Please follow the following steps.

Note: THE SENSOR IS ONLY ACTIVE FOR CONFIGURATION IN THE FIRST 60 SINCE POWER UP BY BATTERY OR PLUGGING THE CONFIGURATION CABLE.

1. Prepare equipment and tools

The following items must be prepared for configuration.

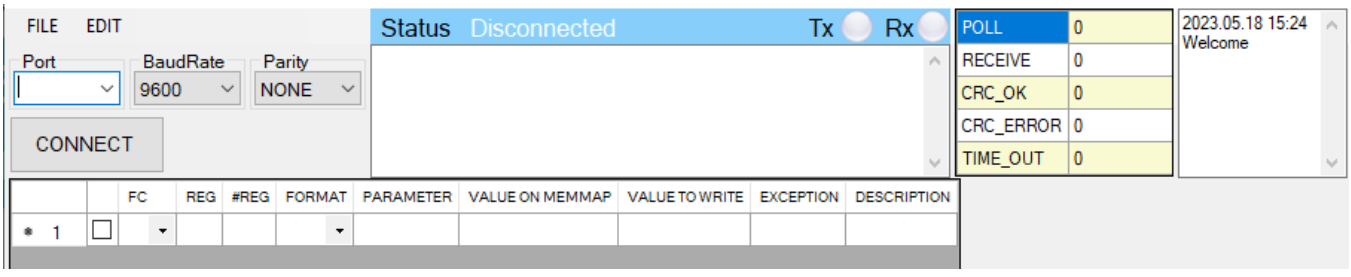
1. A PC using the Windows OS (Win7 or above versions). The PC is installed with the COM port driver of the Modbus configuration cable (if needed). The driver is at link: **Modbus Configuration Cable COM port driver for PC** and the instruction to install the driver at link: **How to install the driver**
2. A Modbus configuration cable;
3. Tools to open the housing of Sigfox-ready sensors (L hex key or screwdriver)

2. Download and launch Daviteq Modbus configuration software

- Click the link below to download Daviteq Modbus configuration software:

https://filerun.daviteq.com/wl/?id=yDOjE5d6kqFlGNVVlMdFg19Aad6aw0Hs

- After downloading the software, unzip the file named:**Daviteq Modbus Configuration Tool.zip** and then copy the extracted folder to the storage drive for long-term use.
- Open the folder, double click on the file**Daviteq Modbus Configuration Tool Version.exe** to launch the software and the software interface as below:



Note: The software only runs on Microsoft Windows OS (win7 and above).

3. Connect the cable and configure the sensor

Step 1: Connect USB plug of Modbus configuration cable to USB socket of the PC



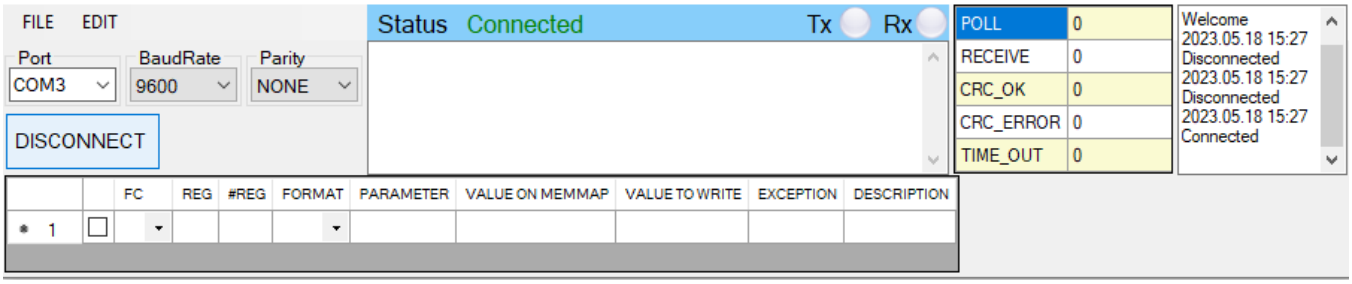
- Use the configuration cable (Item code: TTL-LRW-USB-01).



- Connect the USB-A plug into the USB-A socket of the PC

Step 2: On the configuration software, choose the relevant **Port** (the USB port which is the cable plugged in) and set the **BaudRate: 9600, Parity: none**

Step 3: Click the " **Connect** " button to connect the software to the sensor. After a successful connection, the **connected status**(green text) will show on the software.



Step 4: Import the configuration file for the sensor to the software: click menu**File/ Import New** and then browse the relevant sensor template file (csv file) and click **Open** to import the template file.

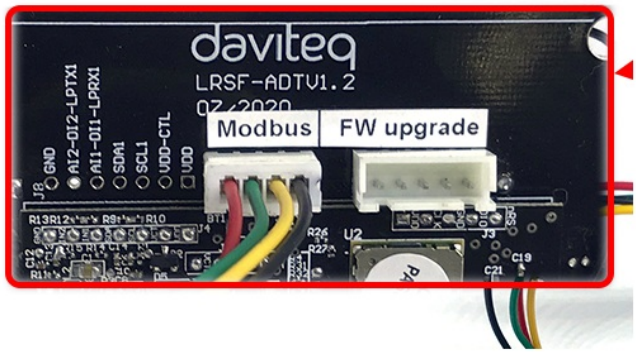
⚠ Each sensor type has its own template file. Refer to the sensor's manual to download the correct file.

⚠ The sensor is only active for configuration for 60 seconds since plugging the configuration cable or the power supply into the sensor.

Step 5: Open the housing of the sensor and quickly plug the connector of the configuration cable into sensor's modbus configuration port. After plugging the connector, the software will read the parameter values automatically.



- Open the housing of the sensor.

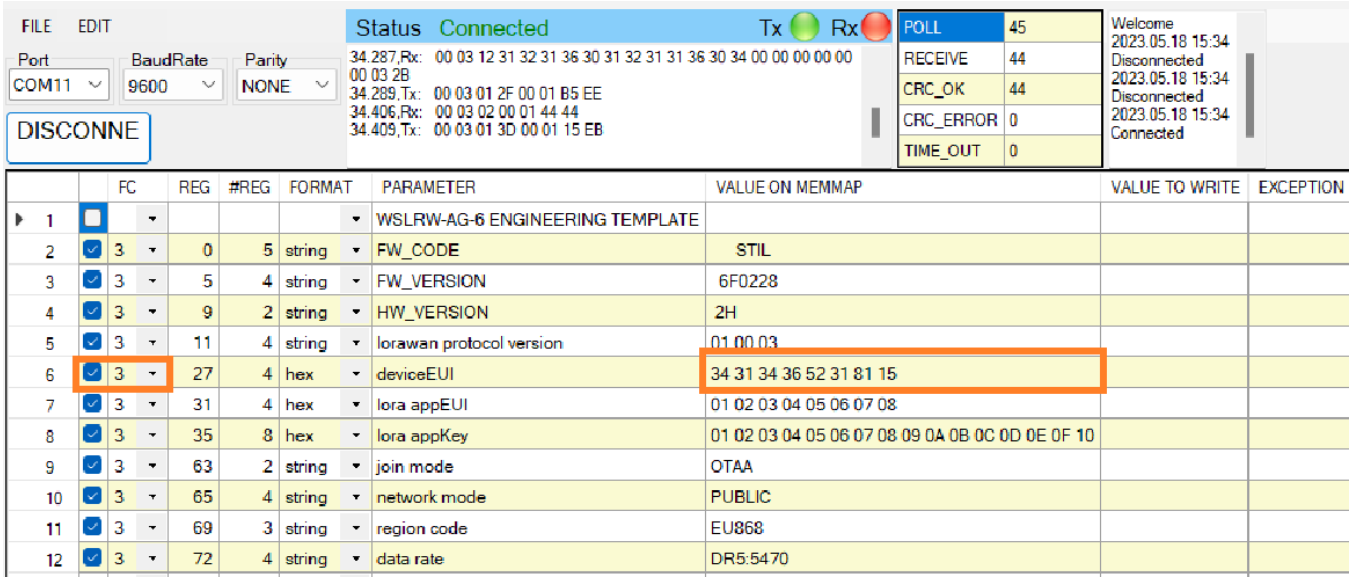


- Plug the cable connector into sensor's modbus configuration port.
Note: this port is located at a different location, depends on the sensor type

⚠ The sensor is only active for configuration for 60 seconds since plugging the configuration cable or the power supply into the sensor.

Step 6: Read the current value of the parameter with function 3

- At the relevant row of the parameter, check box **3** on column **FC** to read the value of the parameter. The read value is shown on **VALUE ON MEMMAP** column.

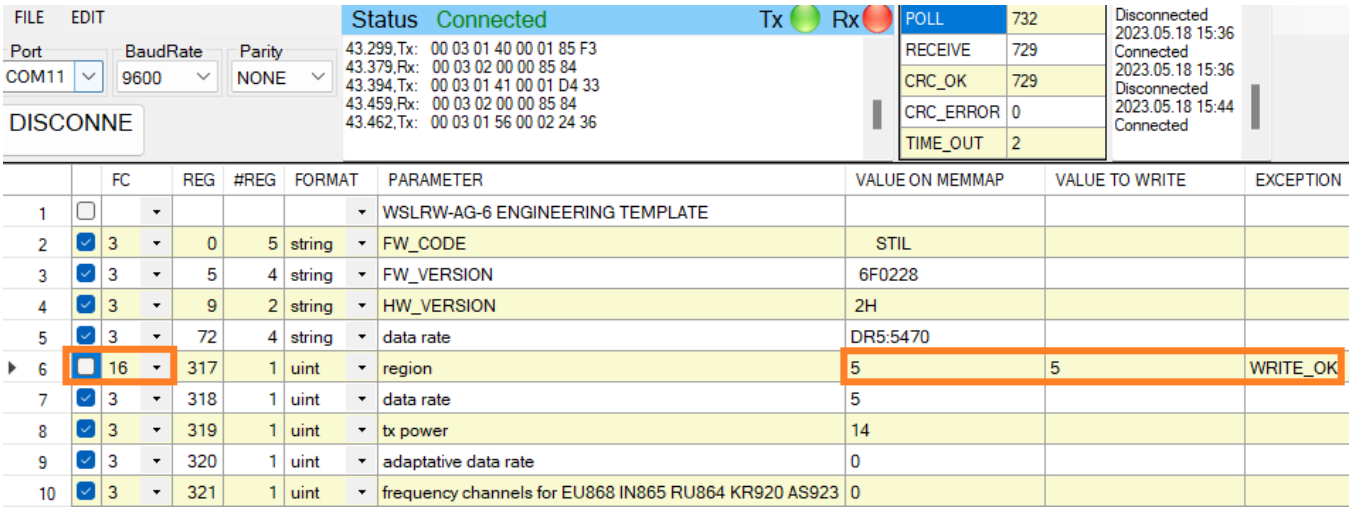


		FC	REG	#REG	FORMAT	PARAMETER	VALUE ON MEMMAP	VALUE TO WRITE	EXCEPTION
1	☐					WSLRW-AG-6 ENGINEERING TEMPLATE			
2	☑	3	0	5	string	FW_CODE	STIL		
3	☑	3	5	4	string	FW_VERSION	6F0228		
4	☑	3	9	2	string	HW_VERSION	2H		
5	☑	3	11	4	string	lorawan protocol version	01.00.03		
6	☑	3	27	4	hex	deviceEUI	34 31 34 36 52 31 81 15		
7	☑	3	31	4	hex	lora appEUI	01 02 03 04 05 06 07 08		
8	☑	3	35	8	hex	lora appKey	01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10		
9	☑	3	63	2	string	join mode	OTAA		
10	☑	3	65	4	string	network mode	PUBLIC		
11	☑	3	69	3	string	region code	EU868		
12	☑	3	72	4	string	data rate	DR5:5470		

⚠ The sensor is only active for configuration for 60 seconds since plugging the configuration cable or the power supply into the sensor. After 60 seconds, the TIME_OUT text will show on EXCEPTION column of the software.

Step 7: Write the new setting to the parameter with function 16

- Double click on the column **VALUE TO WRITE** of the parameter and input the new setting of the parameter
- Uncheck the tick on the **FC** column of the parameter, click on the arrow, select **16** and then check on the **FC** column to write a new setting to the parameter. The **WRITE_OK** text will show on **EXCEPTION** column if the software successfully writes the setting.



		FC	REG	#REG	FORMAT	PARAMETER	VALUE ON MEMMAP	VALUE TO WRITE	EXCEPTION
1	☐					WSLRW-AG-6 ENGINEERING TEMPLATE			
2	☑	3	0	5	string	FW_CODE	STIL		
3	☑	3	5	4	string	FW_VERSION	6F0228		
4	☑	3	9	2	string	HW_VERSION	2H		
5	☑	3	72	4	string	data rate	DR5:5470		
6	☐	16	317	1	uint	region	5	5	WRITE_OK
7	☑	3	318	1	uint	data rate	5		
8	☑	3	319	1	uint	tx power	14		
9	☑	3	320	1	uint	adaptative data rate	0		
10	☑	3	321	1	uint	frequency channels for EU868 IN865 RU864 KR920 AS923	0		

- Repeat step 6 to read the setting of the parameter for checking.

> ⚠ The sensor is only active for configuration for 60 seconds since plugging the configuration cable or the power supply into the sensor. After 60 seconds, the TIME_OUT text will show on EXCEPTION column of the software.

> ⚠ For some critical parameters of the sensor, the password in "password for setting" must be written before writing the new settings to these parameters.

> ⚠ Only read/write registers are allowed to write.

4. Troubleshooting

No.	Phenomena	Reason	Solutions
1	The status on the software always shows **Disconnected** although the configuration cable is connected to the PC	• The selected COM port is incorrect. • The cable is defective	• Select the correct COM port to which the configuration cable connects to PC • Check the cable
2	The software reads no value after importing the right template and connecting the right cable.	• The cable is defective or lost connection • The USB port is defective • There is no power supply to the sensor via configuration cable • The sensor or sensor port is defective	• Check or replace the new configuration cable • Check USB port • Check the power line of the cable • Check the sensor and sensor port
3	No COM port appears in the Port list	• No configuration cable is plugged into the PC • The cable driver is not installed on the PC	• Plug the cable to the PC • Install the driver for the PC
4	The parameter table on the software is empty	• The template file has not been imported	• Go to File/Import New to import the template file
5	The parameter table on the software does NOT match the memory map table of the sensor.	• The wrong template file was imported.	• Go to the correct manual page of the product and download the right template file, then import the template file into the software.

5. List of Configuration Template Files for various Sigfox-Ready Sensors

Please find **this link** for the template file of each Sigfox-Ready sensor.

END.

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