

Tools and Documents

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List of Tools and Configuration Documents

1. Configuration Tool on PC:

1.1 Modbus Configuration Tool:

- Version 1.0: <https://filerun.daviteq.com/wl/?id=J9cdBHxOUFhRvywywQBun6zJmLhnA6u>
- Version 1.2 (with Template): <https://filerun.daviteq.com/wl/?id=RtuE0i9N8KNJ8fTVdHv4DcJEHdaDcetp>
- Version 1.4: <https://filerun.daviteq.com/wl/?id=qK0PGNbY1g1fuxTqbFW9SXtEvCw7bpc6>
- Version 2.03: <https://filerun.daviteq.com/wl/?id=yDOJE5d6kqFIGNVVIMdFg19Aad6aw0Hs>

1.2 iConnector Configuration Tool:

- Version 2.1.4: <https://filerun.daviteq.com/wl/?id=SsNWQvqmyVk3iuyM8Nwrl8EY8pOpgxQT>
- Version 2.1.5: <https://filerun.daviteq.com/wl/?id=s5QApXosVNZLbATxi0TtKVojX4ms1PxD>

1.3 Sigfox Tool:

- SigfoxFrame-2022.02.28: <https://filerun.daviteq.com/wl/?id=Pg9BS32fTS5QEIXLMVchNDeR4vgLJtVh>

2. Configuration Documents:

2.1 Sub-GHz WS433 Wireless Sensor:

2.1.1 Modbus memmap:

- Template_WR433_V1.6: <https://filerun.daviteq.com/wl/?id=YjjjobfLIIV01rP9t8JxFf12564tF99r>
- Template for WS433-AC: <https://filerun.daviteq.com/wl/?id=s5QApXosVNZLbATxi0TtKVojX4ms1PxD>
- Modbus Memmap of WS433-CL-FW_V1.9 for WS433-FW_V5.xx_200314: <https://filerun.daviteq.com/wl/?id=fnepmO8uKmp7P5R90lu4osu8DcZlzp>
- Modbus Memmap of WS433-CL-FW_V1.9 for WS433-FW_V5.xx_200717: <https://filerun.daviteq.com/wl/?id=AYGwq8lvjvV6co0R1Rlg4B8YrqHi6go>
- Modbus Memmap of WS433-CL-FW_V1.9 for WS433-FW_V5.xx_200825: <https://filerun.daviteq.com/wl/?id=c6GtCgBuFowZthBDM0KVScxsPyZ83U68>
- Modbus Memmap of WS433-CL newest version: <https://filerun.daviteq.com/wl/?id=BKEaUzdArkoc0Hc7nfpRShdPVTovrQZ>

2.1.2 WS433 Wireless sensor:

- WR433-AP-EN-12-Template_WR433_ULA_V1.0.csv: <https://filerun.daviteq.com/wl/?id=BOfpTe7woBFbNULuHqsLhJl4GmZ33fi>
- WR433-AP-EN-08_Template_WR433_V2.0.csv: <https://filerun.daviteq.com/wl/?id=hgrjOg3wwvyrvAZ54p8iZiFpDyXTcnec>
- Excel file calculate a and b (calc_ab.xlsx): <https://filerun.daviteq.com/wl/?id=qTEXAavKI1dSbnkbUgSAQXdK2jEtr1qA>
- CONFIGURATION TEMPLATE FILE FOR RD26.csv: <https://filerun.daviteq.com/wl/?id=1ZNVkHMxCTj0fxWZXrwtWbrr2MYfSc3S>
- WR433-AP-EN-11-Template_WR433_V1A_V1.0.csv: <https://filerun.daviteq.com/wl/?id=ItFaeQgtCmXN98J7GaPdeZvKK5eS1Dd1>

2.2 Sigfox sensor:

- Configuration Template File For Sigfox WSSFC-AI FW1.9.3: <https://filerun.daviteq.com/wl/?id=nZTEYrkbpTqPNXnRZeUwkXpQnMFLmuAQ>

- WSSFC-AP-EN-01-Template_WSSFC_AG_V1.0.csv: <https://filerun.daviteq.com/wl/?id=kQ8a6XqmkfOed2cmMT8y11ZITxxBz6Tu>
- NH3 Sensor-2021.10.30-Template-V1.2.csv: <https://filerun.daviteq.com/wl/?id=R0KxkPxLCDikuPEyu3uM8XhdX8kjcQXr>
- CONFIGURATION TEMPLATE FILE FOR SIGFOX WSSFC-V1A.csv: <https://filerun.daviteq.com/wl/?id=xjsWFgfbOwfKIs3WKAYqLDUrzilbwgc4>
- CONFIGURATION TEMPLATE FILE FOR SIGFOX WSSFCEX-EVC FW1.9.3.csv: <https://filerun.daviteq.com/wl/?id=qznJW83Ie9vVhDdITcN1bCKTfeXCiXke>
- CONFIGURATION TEMPLATE FILE FOR SIGFOX WSSFCEX-PPS FW1.9.3.csv: <https://filerun.daviteq.com/wl/?id=fnyrJTMBkHZMaYmdkuhSUhvXtzqdbkHg>

2.4 LoRaWAN sensor:

- CONFIGURATION TEMPLATE FILE FOR WSLRW-SMT-ULB-ULC FW1.0.csv: <https://filerun.daviteq.com/wl/?id=y266zIX9PnjB46LZt5nupMQKZPc6j3dW>
- CONFIGURATION TEMPLATE FILE FOR LORAWAN SENSOR FW1.0.csv : <https://filerun.daviteq.com/wl/?id=OrusBxds6ZCYB64paNKp6XWTtNsi84Kh>

2.3 Modbus RTU sensor:

- CONFIGURATION TEMPLATE FILE FOR MBRTU-PODO V1.0.csv: <https://filerun.daviteq.com/wl/?id=ijcWTpXwzz0IiAsfO7rInrXQ1LeBdwJu>
- CONFIGURATION TEMPLATE FILE FOR MBRTU-I2C.csv: <https://filerun.daviteq.com/wl/?id=pTIOMMJNK1wF9JBszKybiupqoeWapD58>

User Guide for Modbus Configuration Tool

AUG-2020

Daviteq Modbus Configuration Tool

HW Ver.	Release Date
1.0	NOV-2019
1.4	OCT-2020
2.03	DEC-2021

1. Install Tool

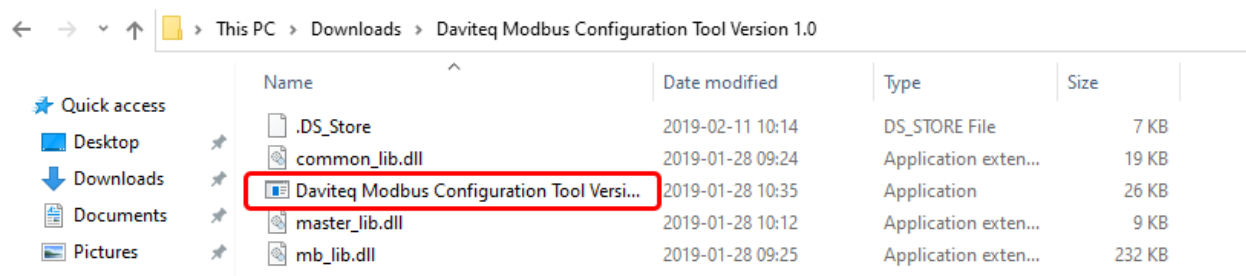
1.1 Download Tool

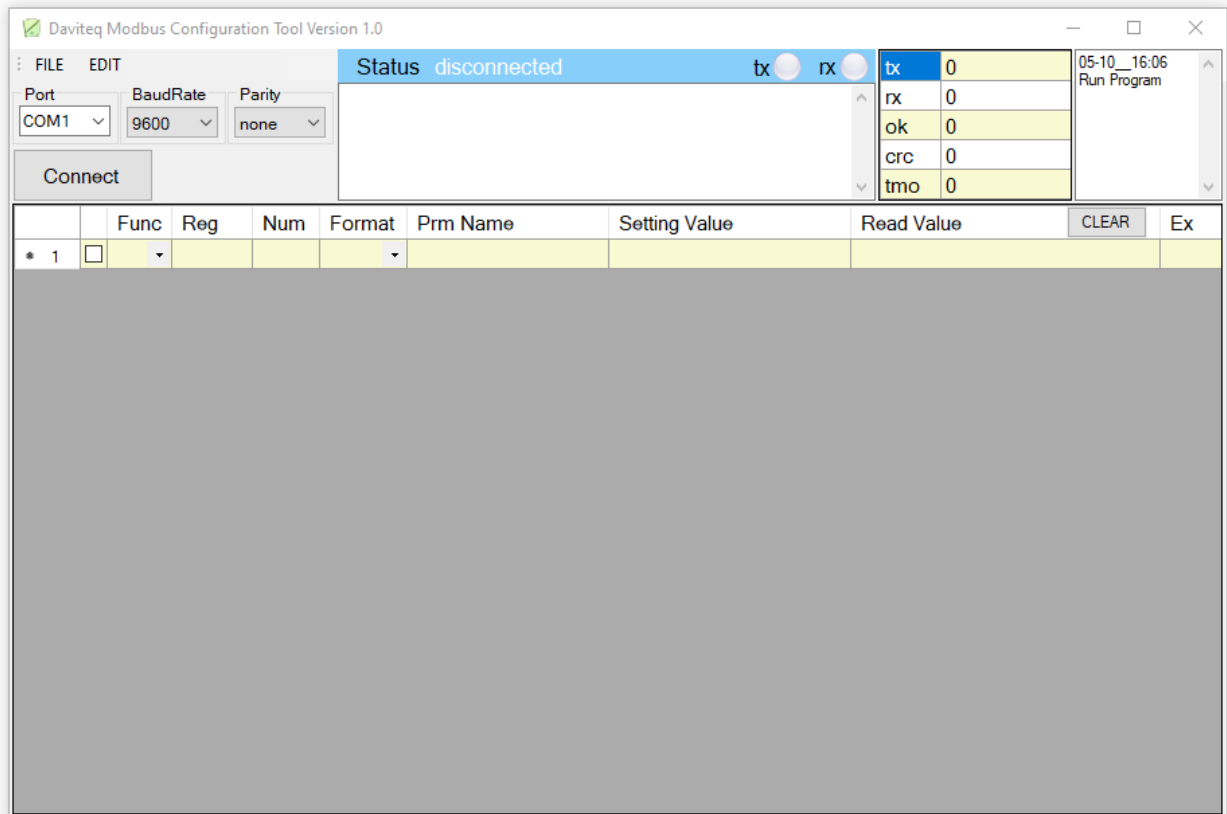
Install the Modbus Configuration Software in the link below

<https://filerun.daviteq.com/wl/?id=yDOjE5d6kqFIGNVVIMdFg19Aad6aw0Hs>

2.2 Running Tool

After unzip file, open the folder and run the application **Daviteq Modbus Configuration Tool Version**).





2. Configuration

2.1 Connection

Step 1: Connect the configuration cable to the PC and Modbus device.

USB-RS485 CONFIGURATION CABLE



STHC-ISG02DB-WS433-CL-04-H8.PNG

CONNECT RS485 - CONFIGURATION
TO COMPUTER via USB



STHC-ISG02DB-WS433-CL-04-H13.PNG

SUPPLY POWER 12-24VDC



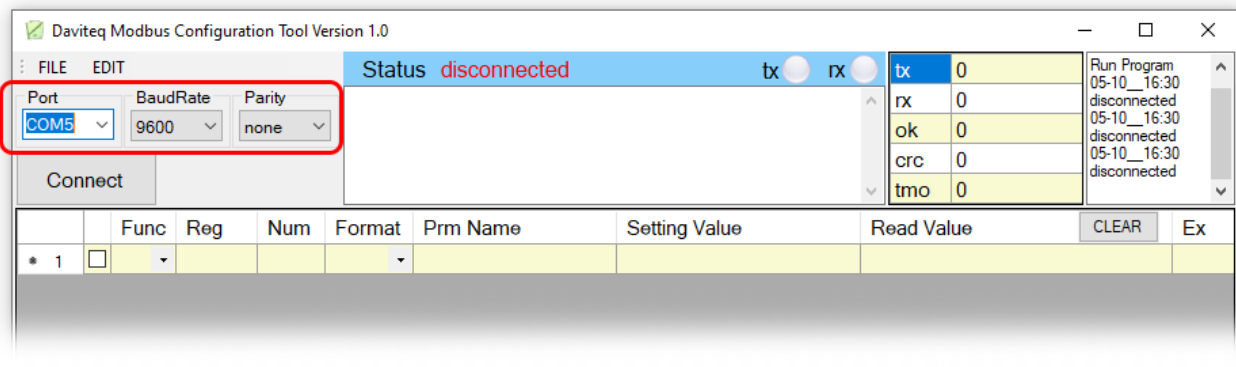
STHC-ISG02DB-WS433-CL-04-H11.PNG

CONNECT TO RS485 - CONFIGURATION
CABLE via M12 CONNECTOR



STHC-ISG02DB-WS433-CL-04-H12.PNG

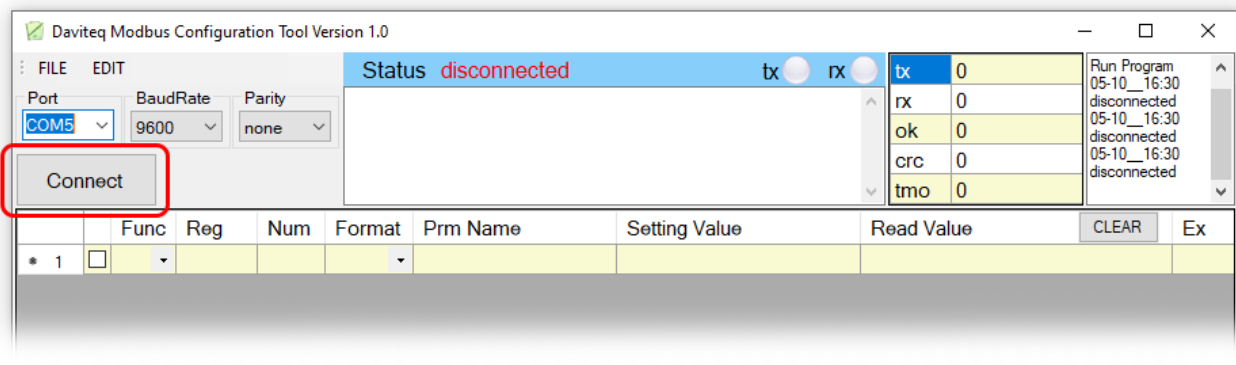
Step 2: Choose **COM Port** (the Port which is USB cable plugged in). Set the **BaudRate: 9600**, **Parity: none**

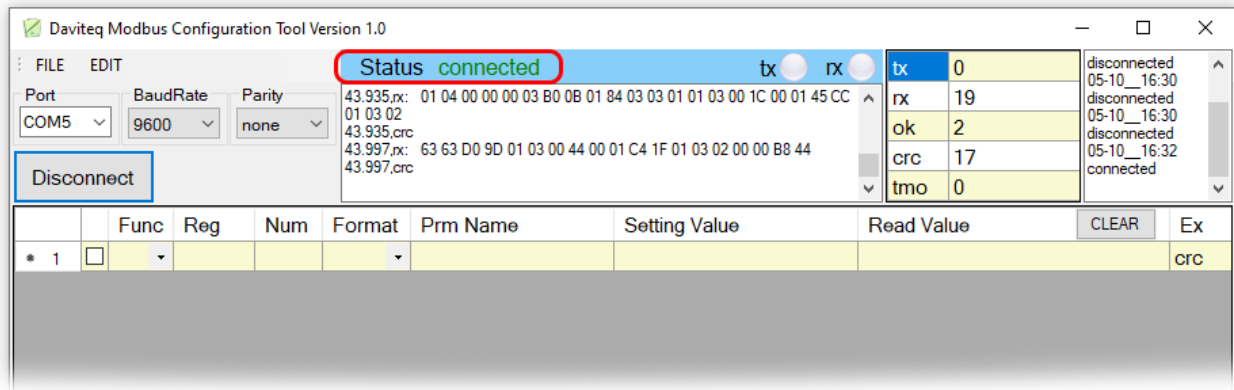


If you don't see any COM port in the list, please download the following driver and install

- 1. [Modbus Configuration Cable COM port driver for PC](#)
[How to install driver](#)

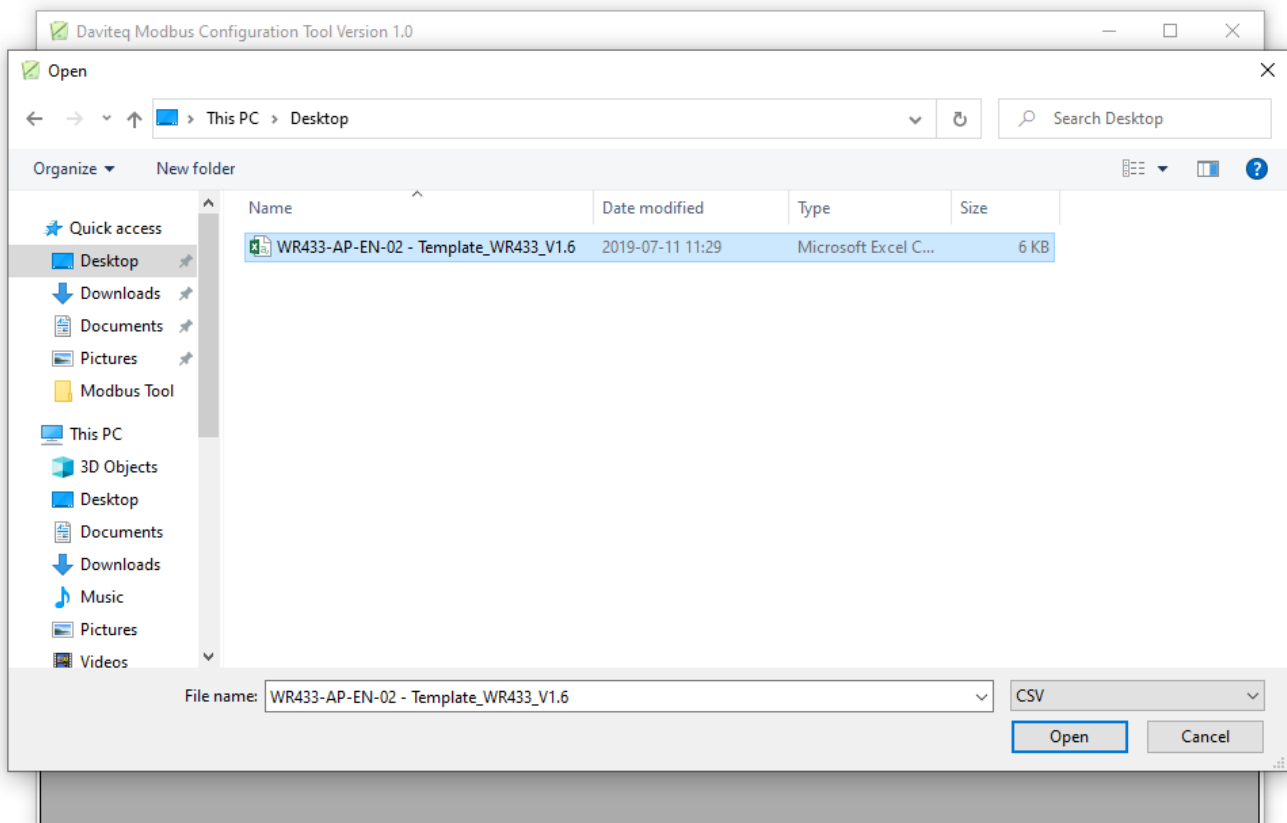
Step 3: Click “**Connect**” until the Status displays “**disconnected**” to “**connected**”. It means the Modbus device is being connected with computer;





Step 4: Import the configuration file for Modbus Device by importing the csv file: Go to MENU: FILE / Import New / Then select the template file.

Example: We import template file of Wireless Co-ordinator WR433-AP-EN-02 - Template_WR433_V1.6.csv



Daviteq Modbus Configuration Tool Version 1.0

FILE EDIT

Port: COM5 BaudRate: 9600 Parity: none

Disconnect

Status: **connected** tx rx

44.420.tx: 01 03 A5 04 00 02 A7 06
 44.467.rx: 01 83 03 01 31
 44.490.tx: 01 03 A6 04 00 02 A7 42
 44.572.rx: 01 83 03 01 31
 44.595.tx: 01 03 A7 04 00 02 A6 BE

tx: 829 rx: 947
 ok: 808
 crc: 139
 tmo: 1

disconnected 05-10_16:32
 connected 05-10_16:42
 disconnected 05-10_16:42
 connected 05-10_16:42

	Func	Reg	Num	Format	Prm Name	Setting Value	Read Value	CLEAR	Ex
1	<input checked="" type="checkbox"/> 3	272	1	uint	num of node		0		
2	<input checked="" type="checkbox"/> 3	273	2	uint	node id 1		0		
3	<input checked="" type="checkbox"/> 3	275	2	uint	node id 2		0		
4	<input checked="" type="checkbox"/> 3	277	2	uint	node id 3		0		
5	<input checked="" type="checkbox"/> 3	279	2	uint	node id 4		0		
6	<input checked="" type="checkbox"/> 3	281	2	uint	node id 5		0		
7	<input checked="" type="checkbox"/> 3	283	2	uint	node id 6		0		
8	<input checked="" type="checkbox"/> 3	285	2	uint	node id 7		0		
9	<input checked="" type="checkbox"/> 3	287	2	uint	node id 8		0		
10	<input checked="" type="checkbox"/> 3	289	2	uint	node id 9		0		
11	<input checked="" type="checkbox"/> 3	291	2	uint	node id 10		0		
12	<input checked="" type="checkbox"/> 3	256	1	uint	modbus address		1		
13	<input checked="" type="checkbox"/> 3	257	1	uint	modbus baudrate		0		
14	<input checked="" type="checkbox"/> 3	258	1	uint	modbus parity		0		
15	<input checked="" type="checkbox"/> 3	41217	2	float	Main parameter 1				3
16	<input checked="" type="checkbox"/> 3	41473	2	float	Main parameter 2				3
17	<input checked="" type="checkbox"/> 3	41729	2	float	Main parameter 3				3
18	<input checked="" type="checkbox"/> 3	41985	2	float	Main parameter 4				3
19	<input checked="" type="checkbox"/> 3	42241	2	float	Main parameter 5				3

There are 3 Function:

- Function **3**: Read holding registers
- Function **4**: Read input registers
- Function **16**: Preset Multiple registers

2.1 Write Value into Modbus Device with Function 16

Example: We change the value **Node id 1** from **0** to **12345678** using Func 16.

Step 1: Uncheck Func 3, then Click on the arrow and change Func from **3** to **16**;

Daviteq Modbus Configuration Tool Version 1.0

FILE EDIT

Port: COM6 BaudRate: 9600 Parity: none

Disconnect

Status: **connected** tx rx

05.210.tx: 01 03 01 F8 00 02 44 06
 05.306.rx: 01 03 04 00 00 00 00 FA 33
 05.309.tx: 01 03 02 08 00 01 04 70
 05.386.rx: 01 03 02 00 78 B8 66
 05.400.tx: 01 03 02 09 00 01 55 B0

tx: 8139 rx: 8139
 ok: 7919
 crc: 220
 tmo: 0

Run Program 08-10_14:30
 disconnected 08-10_14:30
 disconnected 08-10_14:30
 connected 08-10_14:30

	Func	Reg	Num	Format	Prm Name	Setting Value	Read Value	CLEAR	Ex
1	<input checked="" type="checkbox"/> 3	272	1	uint	num of node		0		
2	<input type="checkbox"/> 3	273	2	uint	node id 1		0		
3	<input checked="" type="checkbox"/> 3	275	2	uint	node id 2		0		
4	<input checked="" type="checkbox"/> 3	277	2	uint	node id 3		0		
5	<input checked="" type="checkbox"/> 3	279	2	uint	node id 4		0		
6	<input checked="" type="checkbox"/> 3	281	2	uint	node id 5		0		

Daviteq Modbus Configuration Tool Version 1.0

FILE EDIT

Port: COM6 BaudRate: 9600 Parity: none

Disconnect

Status: **connected** tx rx

16.438.tx: 01 03 A4 03 00 01 57 3A
 16.499.rx: 01 83 03 01 31
 16.514.tx: 01 03 A5 03 00 01 56 C6
 16.579.rx: 01 83 03 01 31
 16.595.tx: 01 03 A6 03 00 01 56 82

tx: 9684 rx: 9684
 ok: 9424
 crc: 260
 tmo: 0

Run Program 08-10_14:30 disconnected
 08-10_14:30 disconnected
 08-10_14:30 disconnected
 08-10_14:30 connected

	Func	Reg	Num	Format	Prm Name	Setting Value	Read Value	CLEAR	Ex
1	<input checked="" type="checkbox"/> 3	272	1	uint	num of node		0		
2	<input type="checkbox"/> 3	273	2	uint	node id 1		0		
3	<input checked="" type="checkbox"/> 3	275	2	uint	node id 2		0		
4	<input checked="" type="checkbox"/> 16	277	2	uint	node id 3		0		
5	<input checked="" type="checkbox"/> 3	279	2	uint	node id 4		0		
6	<input checked="" type="checkbox"/> 3	281	2	uint	node id 5		0		

Daviteq Modbus Configuration Tool Version 1.0

FILE EDIT

Port: COM6 BaudRate: 9600 Parity: none

Disconnect

Status: **connected** tx rx

36.158.tx: 01 03 00 1D 00 01 14 0C
 36.220.rx: 01 03 02 63 63 D0 9D
 36.222.tx: 01 03 00 1E 00 01 E4 0C
 36.284.rx: 01 03 02 63 63 D0 9D
 36.286.tx: 01 03 00 1E 00 01 E4 0C

tx: 10623 rx: 10622
 ok: 10339
 crc: 283
 tmo: 0

Run Program 08-10_14:30 disconnected
 08-10_14:30 disconnected
 08-10_14:30 disconnected
 08-10_14:30 connected

	Func	Reg	Num	Format	Prm Name	Setting Value	Read Value	CLEAR	Ex
1	<input checked="" type="checkbox"/> 3	272	1	uint	num of node		0		
2	<input type="checkbox"/> 16	273	2	uint	node id 1		0		
3	<input checked="" type="checkbox"/> 3	275	2	uint	node id 2		0		
4	<input checked="" type="checkbox"/> 3	277	2	uint	node id 3		0		
5	<input checked="" type="checkbox"/> 3	279	2	uint	node id 4		0		
6	<input checked="" type="checkbox"/> 3	281	2	uint	node id 5		0		

Step 2: Type in **Setting Value** the **Node id 1**, then check the Func 16 box.

Daviteq Modbus Configuration Tool Version 1.0

FILE EDIT

Port: COM6 BaudRate: 9600 Parity: none

Disconnect

Status: **connected** tx rx

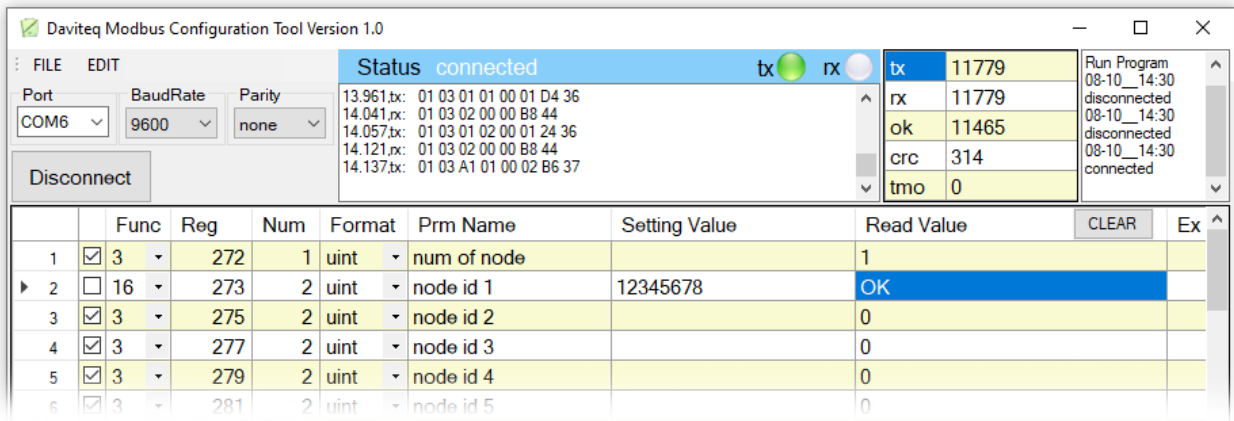
55.957.tx: 01 03 00 44 00 01 C4 1F
 56.034.rx: 01 03 02 00 00 B8 44
 56.050.tx: 01 03 00 45 00 01 95 DF
 56.114.rx: 01 03 02 00 00 B8 44
 56.122.tx: 01 03 00 45 00 01 95 DF

tx: 11565 rx: 11565
 ok: 11258
 crc: 307
 tmo: 0

Run Program 08-10_14:30 disconnected
 08-10_14:30 disconnected
 08-10_14:30 disconnected
 08-10_14:30 connected

	Func	Reg	Num	Format	Prm Name	Setting Value	Read Value	CLEAR	Ex
1	<input checked="" type="checkbox"/> 3	272	1	uint	num of node				crc
2	<input checked="" type="checkbox"/> 16	273	2	uint	node id 1	12345678	0		
3	<input checked="" type="checkbox"/> 3	275	2	uint	node id 2		0		
4	<input checked="" type="checkbox"/> 3	277	2	uint	node id 3		0		
5	<input checked="" type="checkbox"/> 3	279	2	uint	node id 4		0		
6	<input checked="" type="checkbox"/> 3	281	2	uint	node id 5		0		

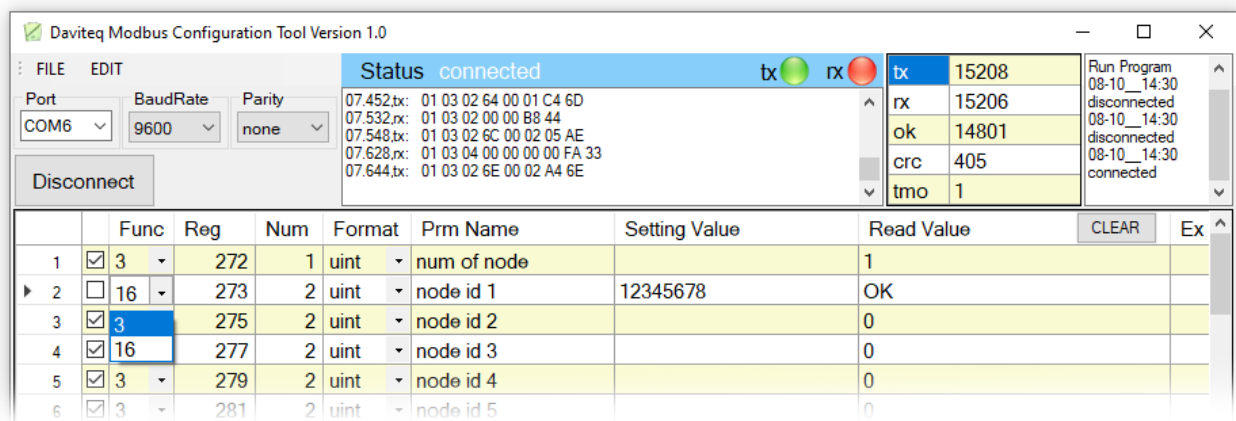
if **Read Value** show **OK** which mean it's wrote successful.



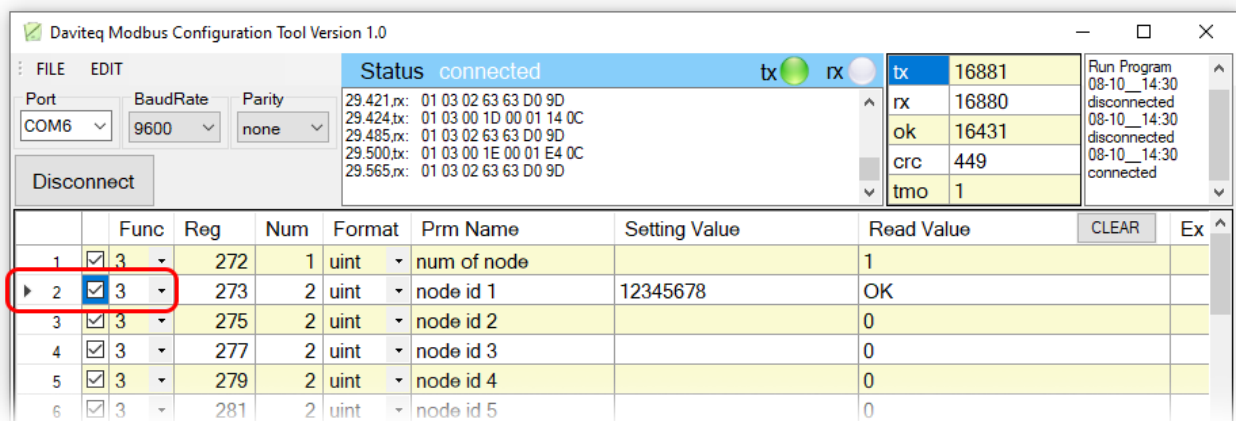
2.1 Read Value from Modbus Device with Function 3

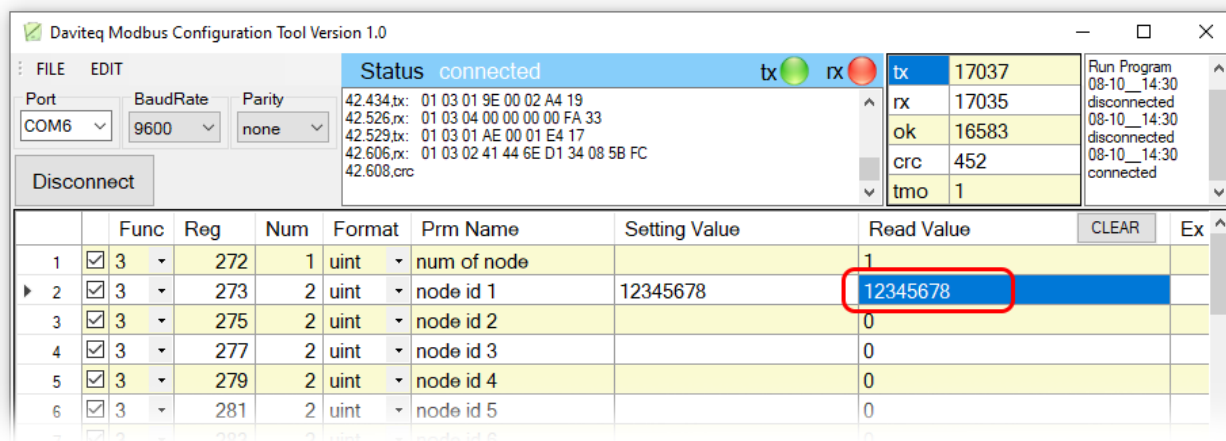
After writing the value, we will check the value entered with Func 3. **Func 3** is used to read holding registers.

Step 1: Click on the arrow and change Func from 16 to 3.



Step 2: Check the box of Func 3. If it shows that the value in **Read Value** is the same as the value entered, it means that the data entered was successful.





3. Troubleshooting

No.	Phenomena	Reason	Solutions
1	Cannot connect to software	<ul style="list-style-type: none"> The COM port selected is incorrect. Modbus cannot be connected to the device. 	<ul style="list-style-type: none"> Check Modbus connection Select the correct COM port to which the configuration cable connects to the computer
2	COM port does not appear in the select list	<ul style="list-style-type: none"> Have not updated window to the latest version Driver not installed 	<ul style="list-style-type: none"> Update to the latest version for window Install driver for PC
3	Cannot see any register on software	The template file has not been imported	Go to File/Import New to import the template file
4	See registers that do not match the memmap table of the device rs485 or sensor is configuring	The template file imported incorrectly	Go to the correct manual page of the product configuring and download the template file, then import the template file into the software

4. Support contacts

Manufacturer

Daviteq Technologies Inc
 No.11 Street 2G, Nam Hung Vuong Res., An Lac Ward,
 Binh Tan Dist., Ho Chi Minh City, Vietnam.
 Tel: +84-28-6268.2523/4 (ext.122)
 Email: info@daviteq.com | www.daviteq.com

Distributor in **Australia** and **New Zealand**


TEMPLOGGER
 A COOL PEACE OF MIND
Templogger Pty Ltd
 Tel: 1800 LOGGER
 Email: contact@templogger.net

How to use Excel file Modbus Memmap of Co-ordinator

FEB-2022

1. Introduce

When we add a sensor to the Co-ordinator WS433-CL or iConnector integrated Co-ordinator, the added sensor will be in the corresponding Modbus area in the Co-ordinator. The sensor's Modbus area can be monitored with our excel file. You can then read the data from the respective Modbus addresses using the PLC,HMI,... or use our Modbus Configuration Tool to view the values from the sensor.

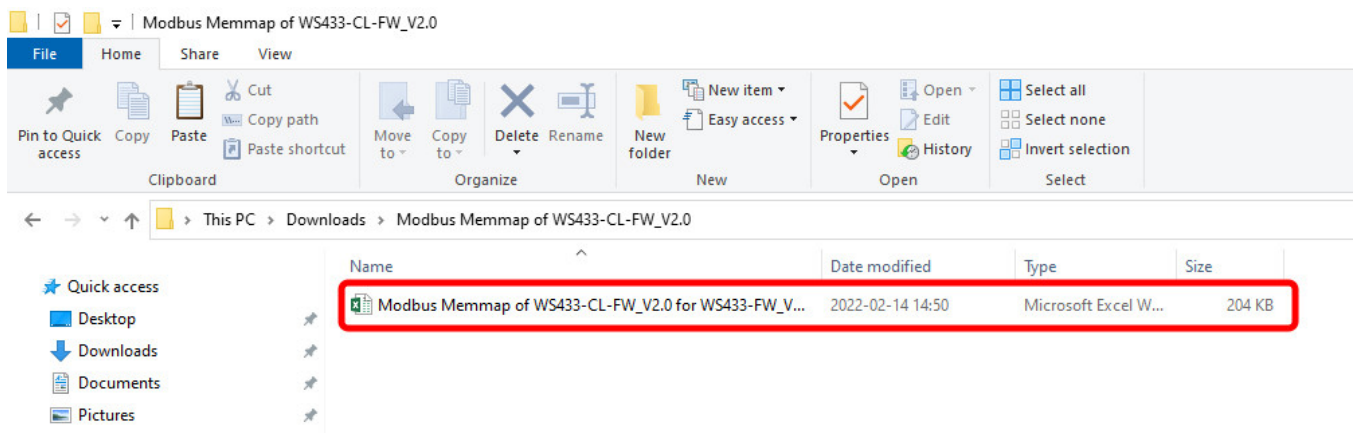
1.1 Download Excel file

Download the Modbus Memmap Excel file in the link below:

<https://filerun.daviteq.com/wl/?id=BKEaUzdArkoc0Hc7nfpRShdPVTovrqqZ>

1.2 Excel file

After **unzip** file, open the excel file (**Modbus Memmap of WS433-CL-FW_Vxx**)



MODBUS MEMORY MAP FOR WIRELESS HUMIDITY SENSOR WS433-M12F WITH ATH														
Please enter Sensor Node's ID (1 .. 40):						3	to get the correct address of registers in column (1)							
* A standard register in Modbus is a WORD (2 bytes, comprise Hi-Byte and Lo-Byte)														
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
	Modbus Register	Modbus Register (Decimal)	Modbus Register (HEX)	Function Code (Read)	Function Code (Write)	# of register	Byte Size	Description	Value Range	Default	Format	Property	Explanation	Remarks
OPERATION DATA * This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta	30065	64	40	4	1	2	2	%Battery of sensor Node	0.30-60.93		unit16	Read	Battery level, only 04 levels: 10%, 30%, 60% and 93% (full). When 10% ==> should replace the battery	
	30066	65	41	4	2	4	4	Humidity value of sensor Node (parameter 1)	0..100%		float	Read	Value from humidity sensor. This value is parameter 1 of a wireless sensor node	
	30068	67	43	4	1	2	2	Status bytes of sensor Node			unit16	Read	Hi-Byte is error code, Lo-Byte is sensor type	
	30069	68	44	4	2	4	4	Temperature value of sensor Node (parameter 2)			float	Read	Value from humidity sensor. This value is parameter 2 of a wireless sensor node	for sensor with V5.x
	30071	70	46	4	1	2	2	Logic status of parameters			unit16	Read	Hi-Byte is Logic status of parameter 1, Lo-Byte is Logic status of parameter 2	for sensor with V5.x
	30072	71	47	4	2	4	4	Timer up 1			unit32	Read	Total time when Hi-Byte of Logic status = 1	for sensor with V5.x
	30074	73	49	4	2	4	4	Timer down 1			unit32	Read	Total time when Hi-Byte of Logic status = 0	for sensor with V5.x
	30076	75	4B	4	2	4	4	RisingEdge counter 1			unit32	Read	Counter value when Hi-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30078	77	4D	4	2	4	4	FallingEdge counter 1			unit32	Read	Counter value when Hi-Byte of Logic status changes from 1 to 0	for sensor with V5.x
	30080	79	4F	4	2	4	4	Timer up 2			unit32	Read	Total time when Lo-Byte of Logic status = 1	for sensor with V5.x
STATUS DATA * Read this data to know the RF signal	30082	81	51	4	2	4	4	Timer down 2			unit32	Read	Total time when Lo-Byte of Logic status = 0	for sensor with V5.x
	30084	83	53	4	2	4	4	RisingEdge counter 2			unit32	Read	Counter value when Lo-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30086	85	55	4	2	4	4	FallingEdge counter 2			unit32	Read	Counter value when Lo-Byte of Logic status changes from 1 to 0	for sensor with V5.x
	40030	29	1D	3	1	2	2	Data status of Node	0-9, 39		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40070	69	45	3	1	2	2	RF Signal strength of Node	0-4		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40190	189	BD	3	1	2	2	Sync status of Node	0-2		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	for sensor with V5.x

- We will see the parameters in the address column will change

Please enter Sensor Node's ID (1 .. 40):						3						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)					
	Modbus Register	Modbus Register (Decimal)	Modbus Register (HEX)	Function Code (Read)	Function Code (Write)	# of register	Byte Size	Description				
OPERATION DATA <i>* This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta</i>	30065	64	40	4		1	2	%Battery of sensor Node				
	30066	65	41	4		2	4	Humidity value of sensor Node (parameter 1)				
	30068	67	43	4		1	2	Status bytes of sensor Node				
	30069	68	44	4		2	4	Temperature value of sensor Node (parameter 2)				
	30071	70	46	4		1	2	Logic status of parameters				
	30072	71	47	4		2	4	Timer up 1				
	30074	73	49	4		2	4	Timer down 1				
	30076	75	4B	4		2	4	RisingEdge counter 1				
	30078	77	4D	4		2	4	FallingEdge counter 1				
	30080	79	4F	4		2	4	Timer up 2				
STATUS DATA <i>* Read this data to know the RF signal</i>	30082	81	51	4		2	4	Timer down 2				
	30084	83	53	4		2	4	RisingEdge counter 2				
	30086	85	55	4		2	4	FallingEdge counter 2				
	40030	29	1D	3		1	2	Data status of Node				
	40070	69	45	3		1	2	RF Signal strength of Node				
	40190	189	BD	3		1	2	Sync status of Node				

2

3

4

5

6

7

8

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24

MODBUS MEMORY MAP FOR WIRELESS HUMIDITY SENSING

Please enter Sensor Node's ID (1 .. 40):

6

(1)

(2)

(3)

(4)

(5)

(6)

(7)

Modbus Register

Modbus Register (Decimal)

Modbus Register (HEX)

Function Code (Read)

Function Code (Write)

of register

Byte Size

Description

OPERATION DATA

* This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta

30161

160

A0

4

1

2

%Battery of sensor Node

30162

161

A1

4

2

4

Humidity value of sensor Node (parameter 1)

30164

163

A3

4

1

2

Status bytes of sensor Node

30165

164

A4

4

2

4

Temperature value of sensor Node (parameter 2)

30167

166

A6

4

1

2

Logic status of parameters

30168

167

A7

4

2

4

Timer up 1

30170

169

A9

4

2

4

Timer down 1

30172

171

AB

4

2

4

RisingEdge counter 1

30174

173

AD

4

2

4

FallingEdge counter 1

30176

175

AF

4

2

4

Timer up 2

30178

177

B1

4

2

4

Timer down 2

30180

179

B3

4

2

4

RisingEdge counter 2

30182

181

B5

4

2

4

FallingEdge counter 2

STATUS DATA

* Read this data to know the RF signal

40031

30

1E

3

1

2

Data status of Node

40071

70

46

3

1

2

RF Signal strength of Node

40191

190

BE

3

1

2

Sync status of Node

3. Troubleshooting

No.	Phenomena	Reason	Solutions
1	Cannot type into yellow frame of excel file	Edit mode is not open yet	Click Enable Editing to edit the number in yellow frame
2	No suitable sensor found	Old memmap or other modified sensor name	<ul style="list-style-type: none"> Check HERE the latest memmap file Contact us for support

4. Support contacts



Daviteq Technologies Inc

No.11 Street 2G, Nam Hung Vuong Res., An Lac Ward, Binh Tan Dist., Ho Chi Minh City, Vietnam.

Tel: +84-28-6268.2523/4 (ext.122)

Email: info@daviteq.com | www.daviteq.com

Instructions for Upgrading the Firmware for Daviteq Sigfox Sensor

1. Preparation

- 1.1 Prepare a ST-LINK V2 cable that connect between PC and the sensor.
- 1.2 Save the updated firmware file (.hex) to the PC for flashing to the sensor.
- 1.3 Save the ID & PAC file (.bin) to the PC for configuring the sensors.

2. Download and install the software "STM32 ST-LINK Utility".

The software can be downloaded from internet via the link:<https://www.st.com/en/development-tools/stsw-link004.html>

Get Software				
Part Number	General Description	Latest version	Supplier	Download
STSW-LINK004	STM32 ST-LINK utility (replaced by STM32CubeProgrammer)	4.6.0	ST	Get latest

Figure 1. Getting the software from the website.

3. Set up the hardware


-  Connect the USB port of the ST-LINK V2 to the PC. The other end should be plugged into the PRG port of the sensor.



Figure 2. Hardware setup

4. Software configuration

4.1. Open the **STM32 ST-LINK Utility** software.

4.2 **Target => Settings**. Then, select "**Connect Under Reset**" and check "**Enable debug in Low power mode**" in **Mode** section =>OK

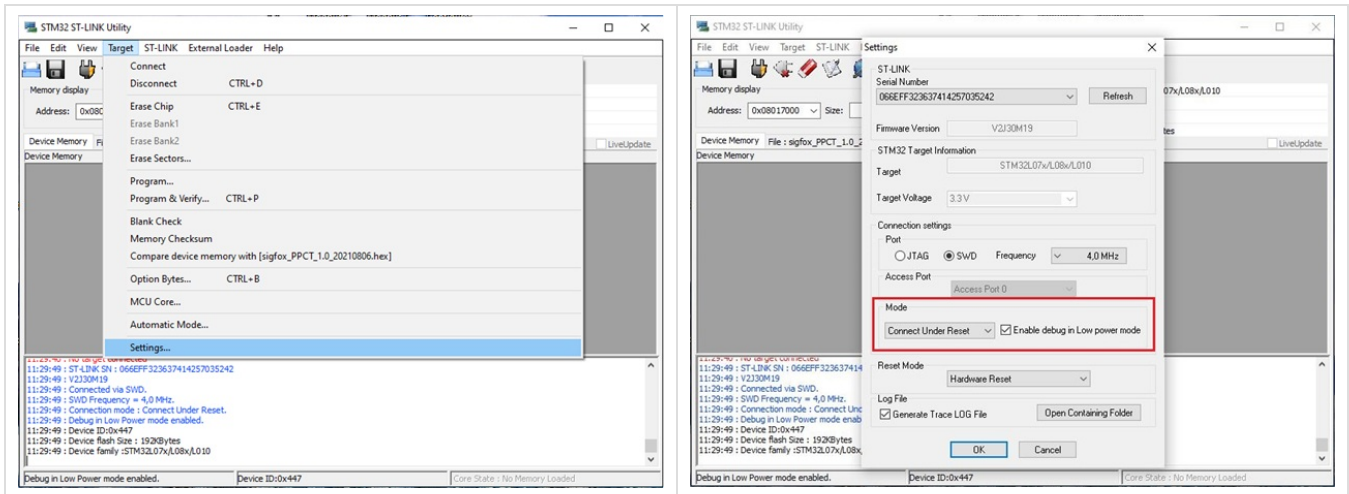


Figure 3. Software configuration

⚠ Make sure that the PC has a connection to the devices with the cable provided.

5. Loading firmwares.

5.1 **Target -> Program & Verify...**

5.2 **File path => Browse => Choose firmware file (.hex)**

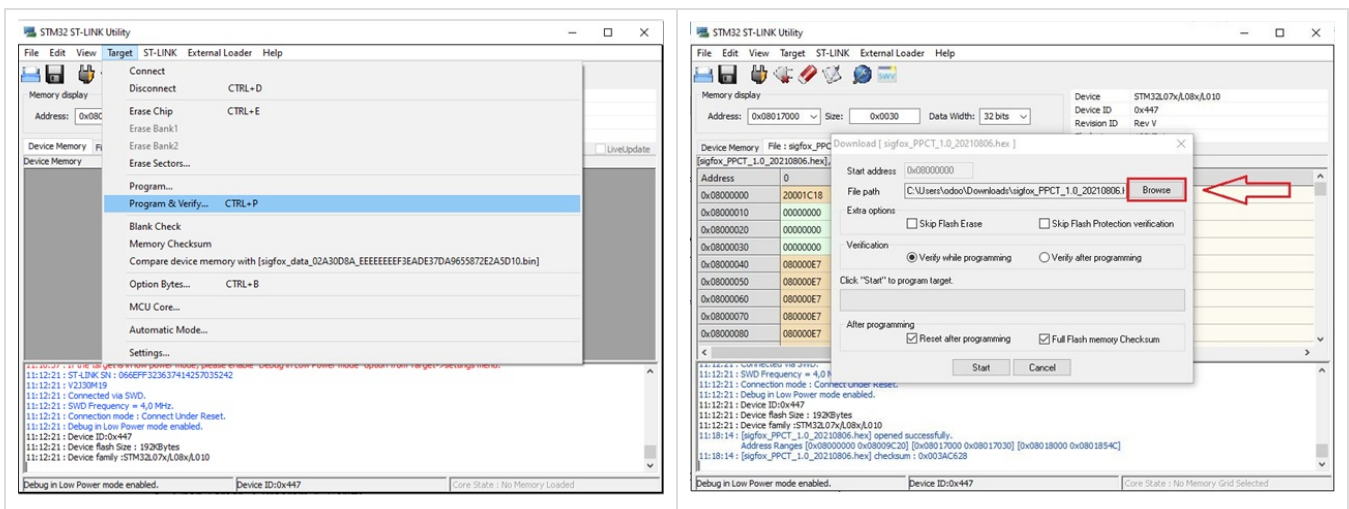


Figure 4. Import firmware file

5.3 Press **Start** to load the firmware to the sensor

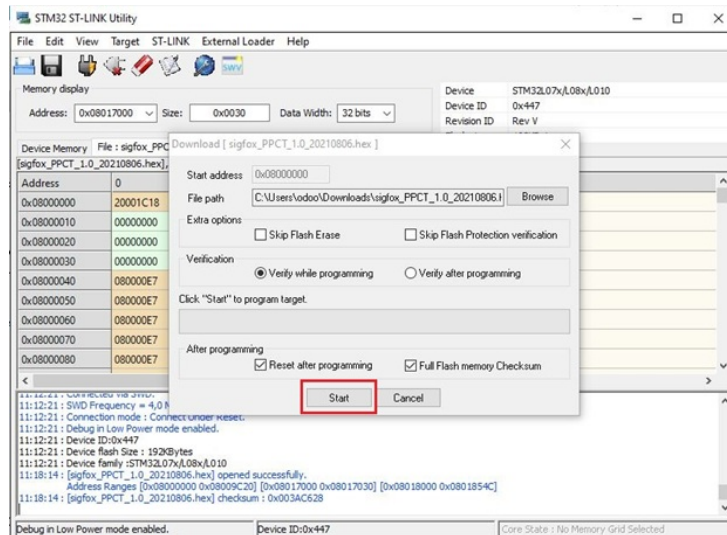


Figure 5. Loading firmware

- ✓ When the firmware is successfully loaded, the software will display information with figure 6

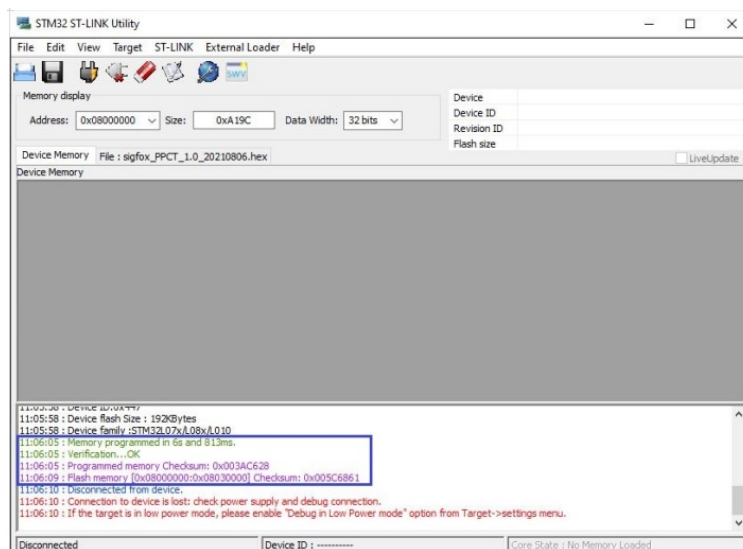


Figure 6. Successfully loading firmware

6. Loading ID and PAC.

After successfully loading the firmware in Step 5, you need to reload the ID&PAC for the sensor. Follow the steps below:

6.1 Target => Program & Verify...

6.2 File path => Browse

6.3 Open ID&PAC file (.bin)

- Each sensor has a unique ID&PAC file. Therefore, you need to carefully check to ensure that the file being loaded corresponds to the correct ID and PAC on the sensor's label. (The .bin file name contains the corresponding ID information.)

6.4 Change the Start Address: 0x08017000 => Start

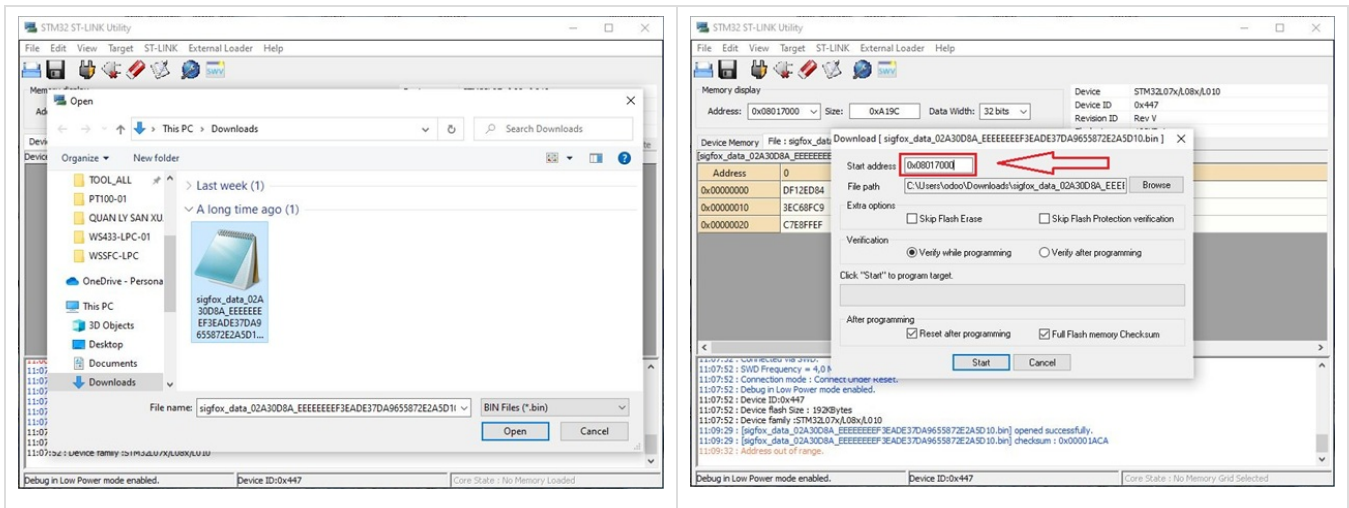


Figure 7. Loading ID&PAC

- ✓ When the firmware is successfully loaded, the software will display information with image 4.

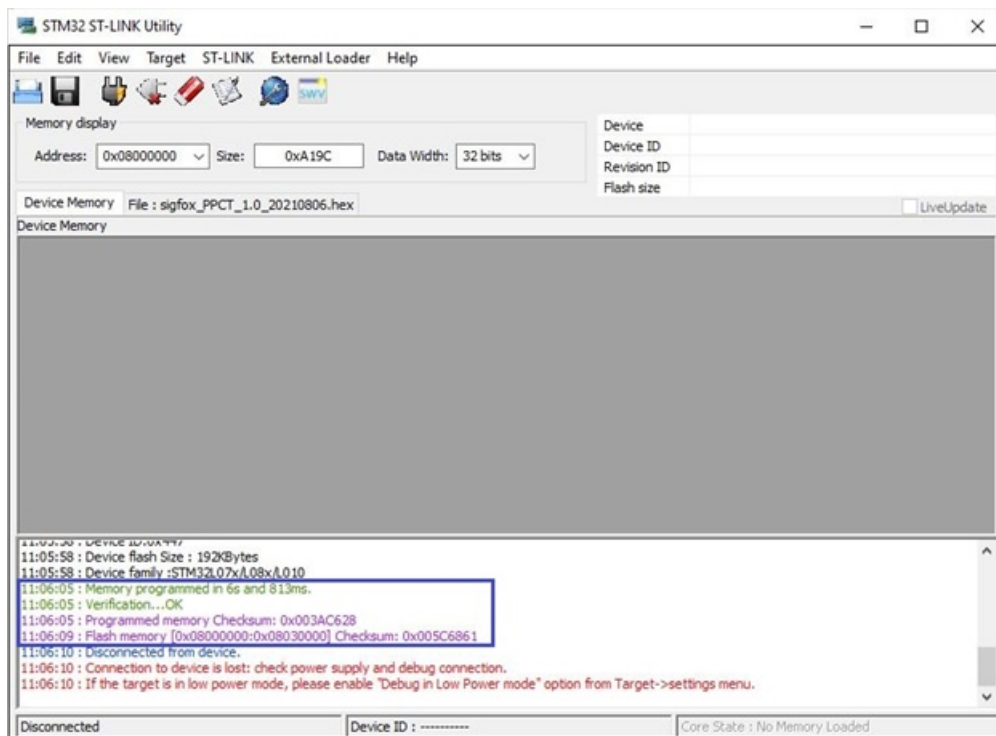


Figure 8. Successfully loading ID& PAC

Support for Flashing The Firmware in Daviteq Lorawan Sensor

1. Preparation

1.1 Prepare a ST-LINK V2 cable that connect between PC and the sensor. Details information of the cable at link:

<https://www.st.com/en/development-tools/st-link-v2.html>

ST-LINK V2 cable could be bought from local ST distributor at your country.

1.2 Save the updated firmware to the PC for flashing to the sensor.

1.3 Note out checksum information of the update firmware. This information will be provided by sensor manufacturer.

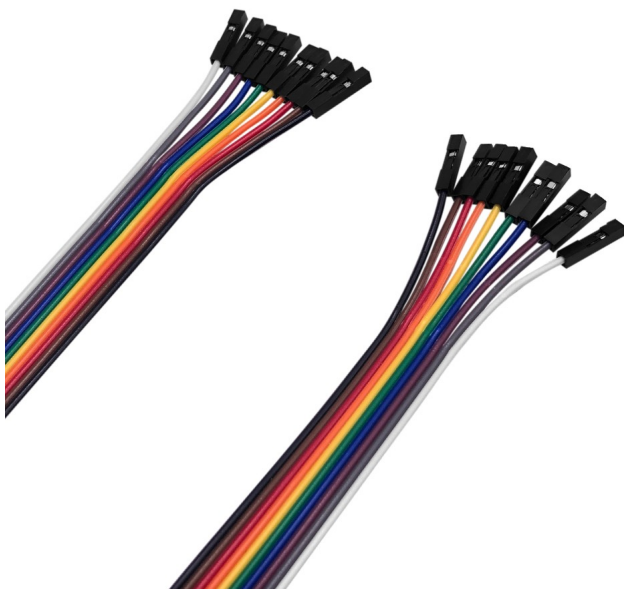
2. Download and install the software "STM32 ST-LINK Utility".

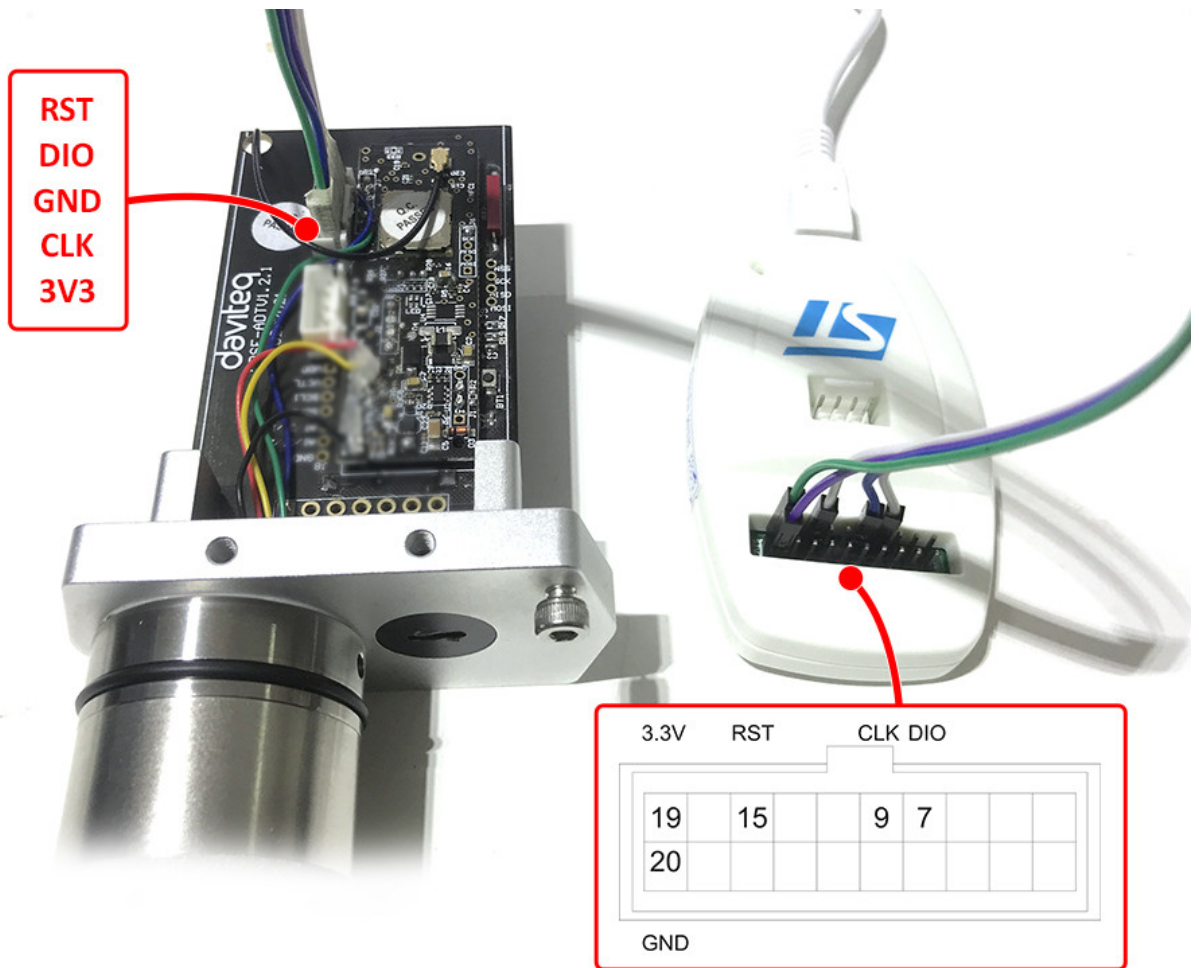
Computer run on Windows 7 or higher.

The software can be downloaded from the link :<https://filerun.daviteq.com/wl/?id=3OVxFN7qe3R7IU9iayCSIHxH45yCM6yE>

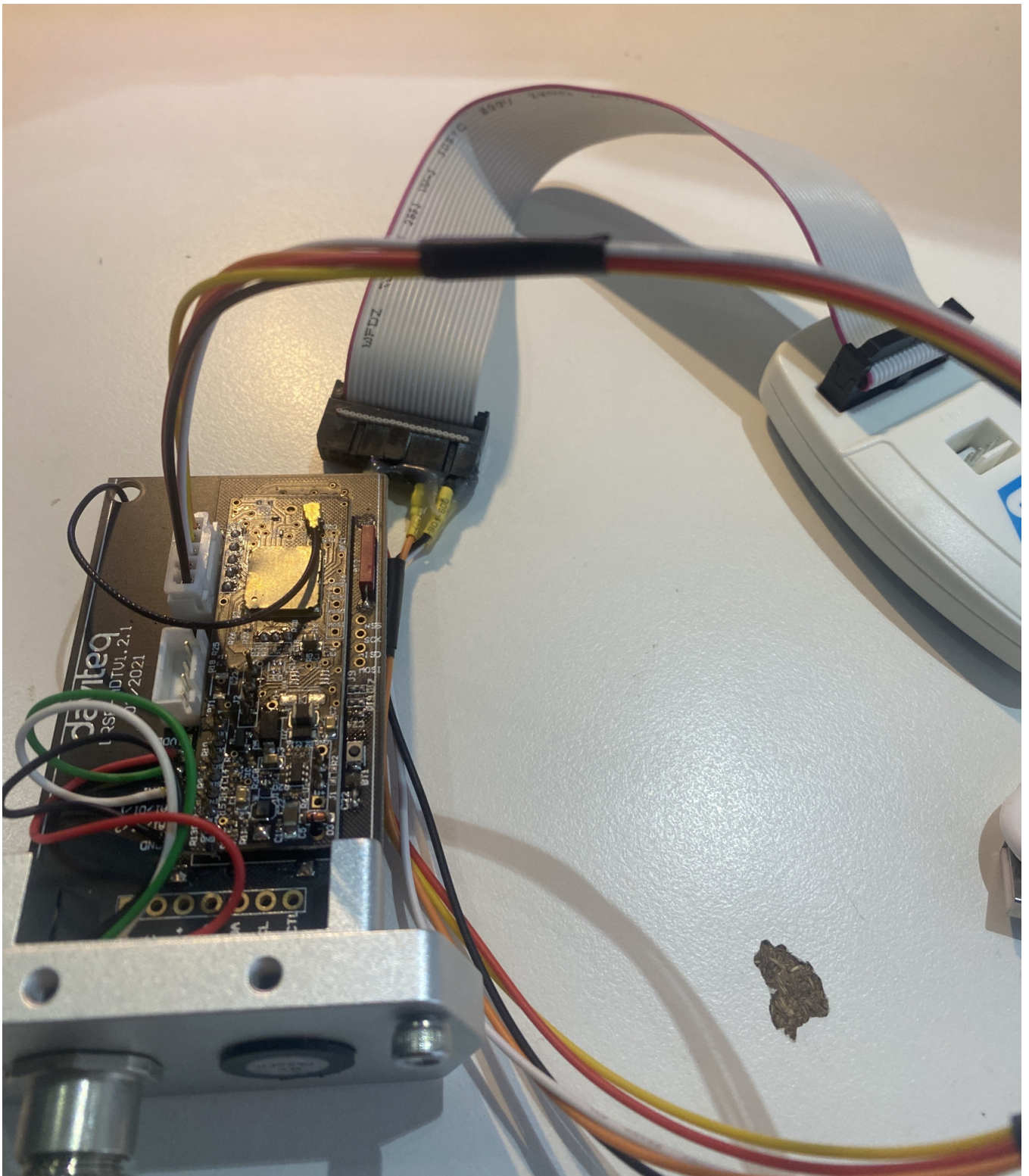
3. Plug cable from ST-LINK V2 to sensor.

With the female to female wire

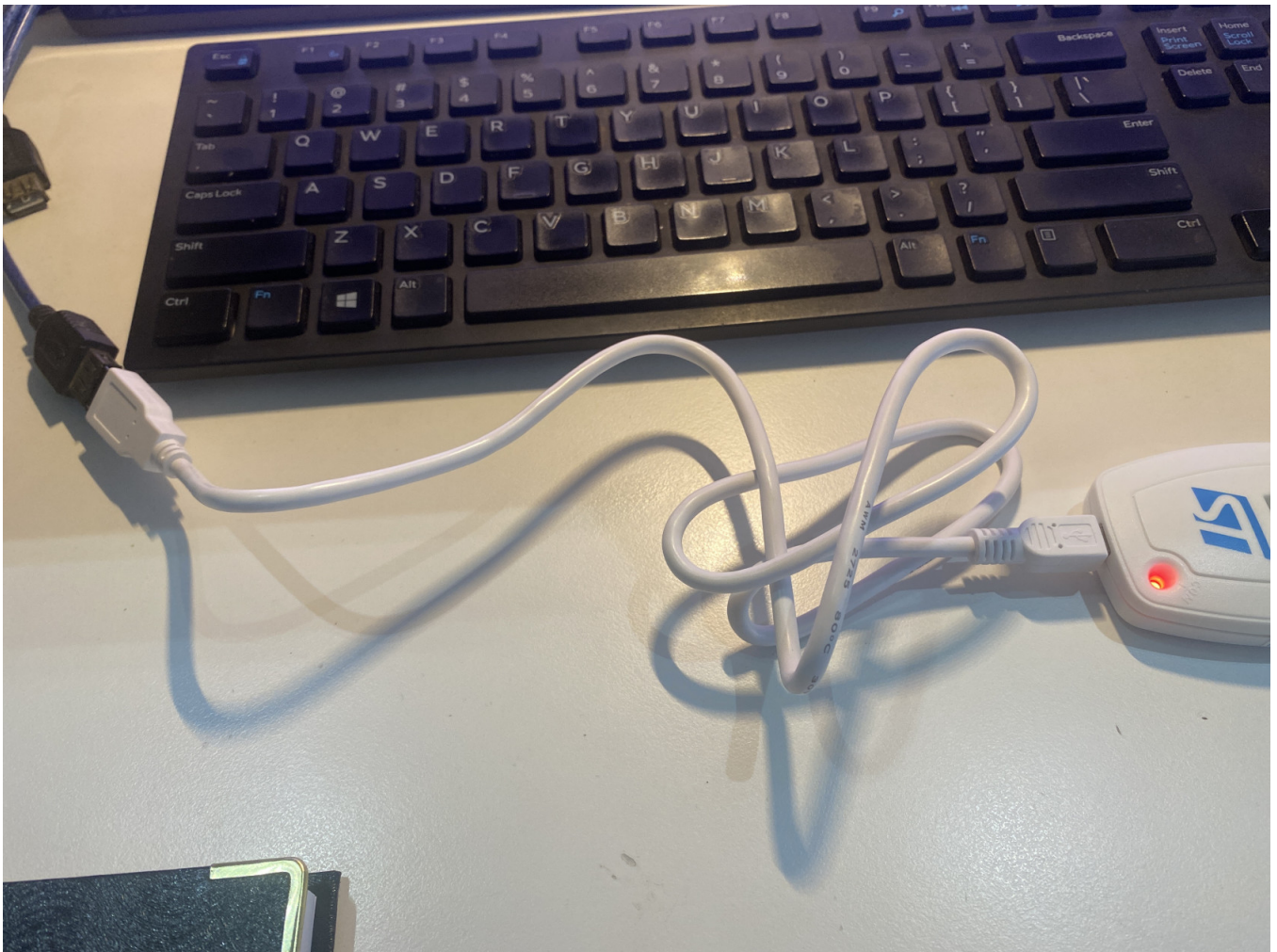




or with the provided cable by Daviteq



Then plug the ST-Link V2 into the computer by the USB A to Mini B cable.



4. Select the mode setting on the software.

Open STM32 ST-LINK Utility.

- 4.1 Target -> Settings...
- 4.2 Mode: select "Connect Under Reset" and check "Enable debug in Low power mode" -> OK

The order of steps 3.1 and step 3.2 indicate through the image from left to right in Table 1.

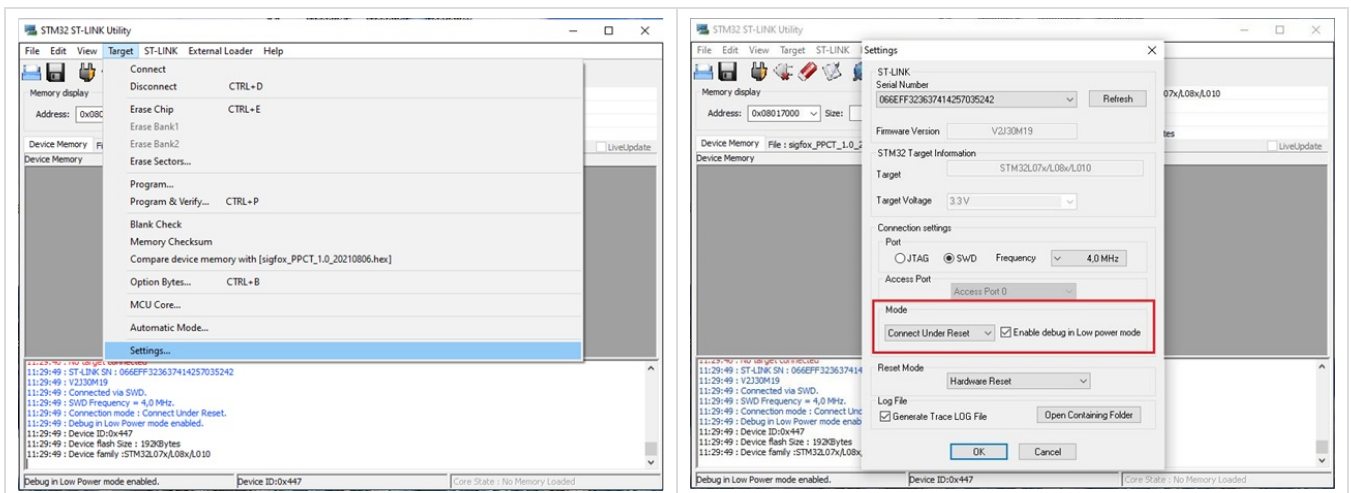


Table 1. Settings... - Mode.

5. Target the hex file for upgrading any firmware.

- 5.1 Target -> Program & Verify...

5.2 File path -> Browse

- Basically, the firmware update specifies the sensor. In this case, please contact the instructor for more information.

Step 5.1 and step 5.2 indicate in the image from left to right in Table 2.

You must browse the correct file, the hex file can be used to apply for the same device type.

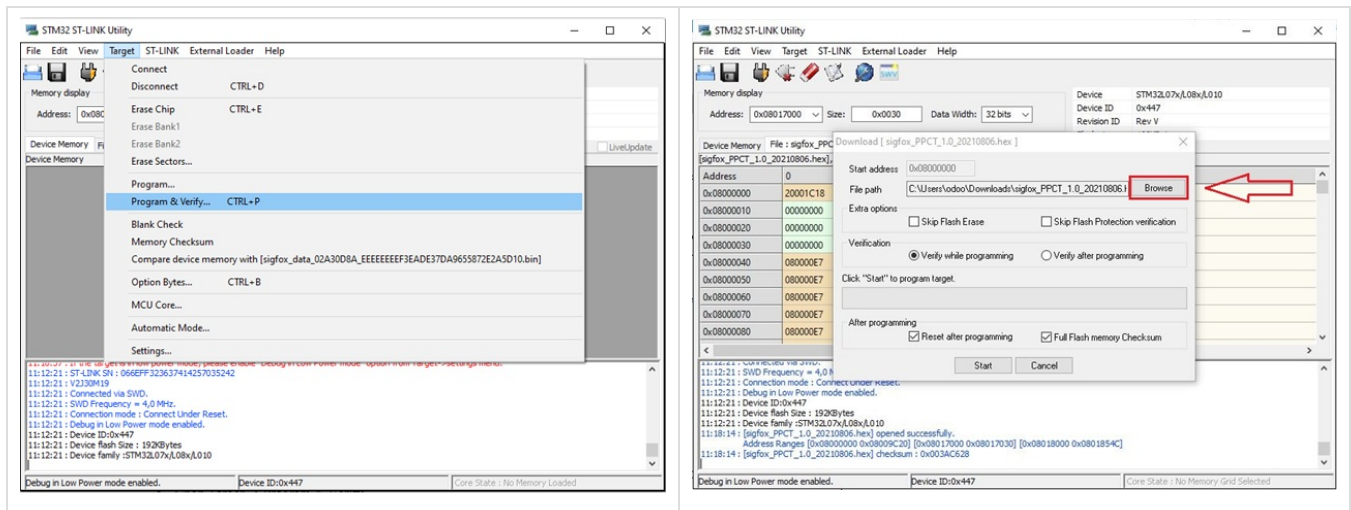


Table 2. Program & Verify... - Browse.

5.3 Open ".hex" file -> Start

In step 5.3, you need to select the hex file and load it into the device.

For example within each image of Table 3, the target is a sensor WSSFC-LPC and is used in this guide. Note the checksum then "Start"

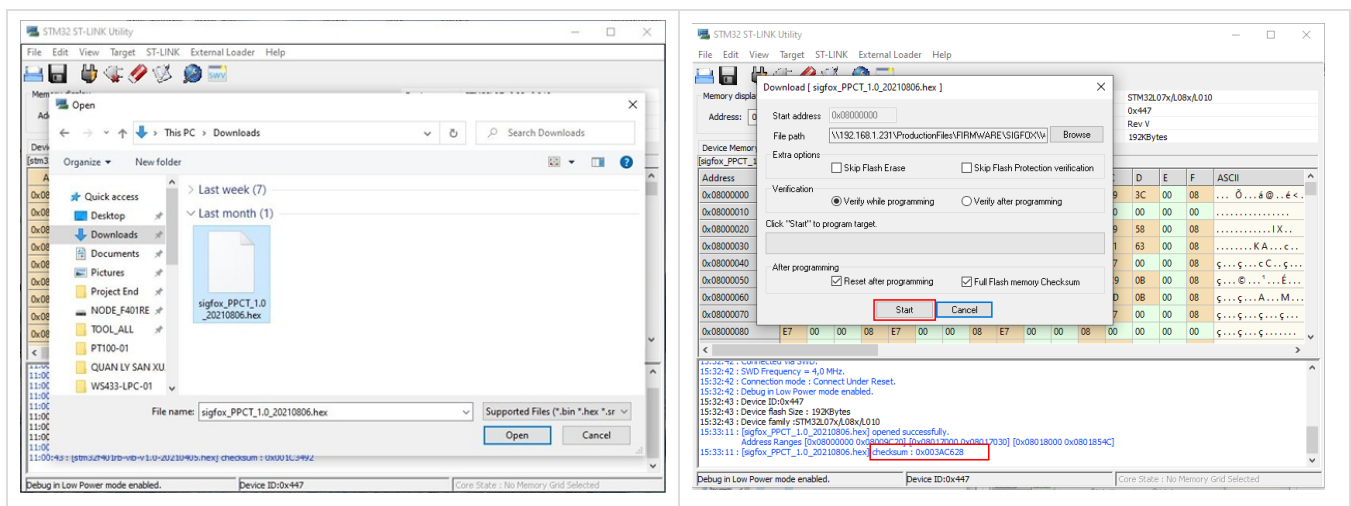
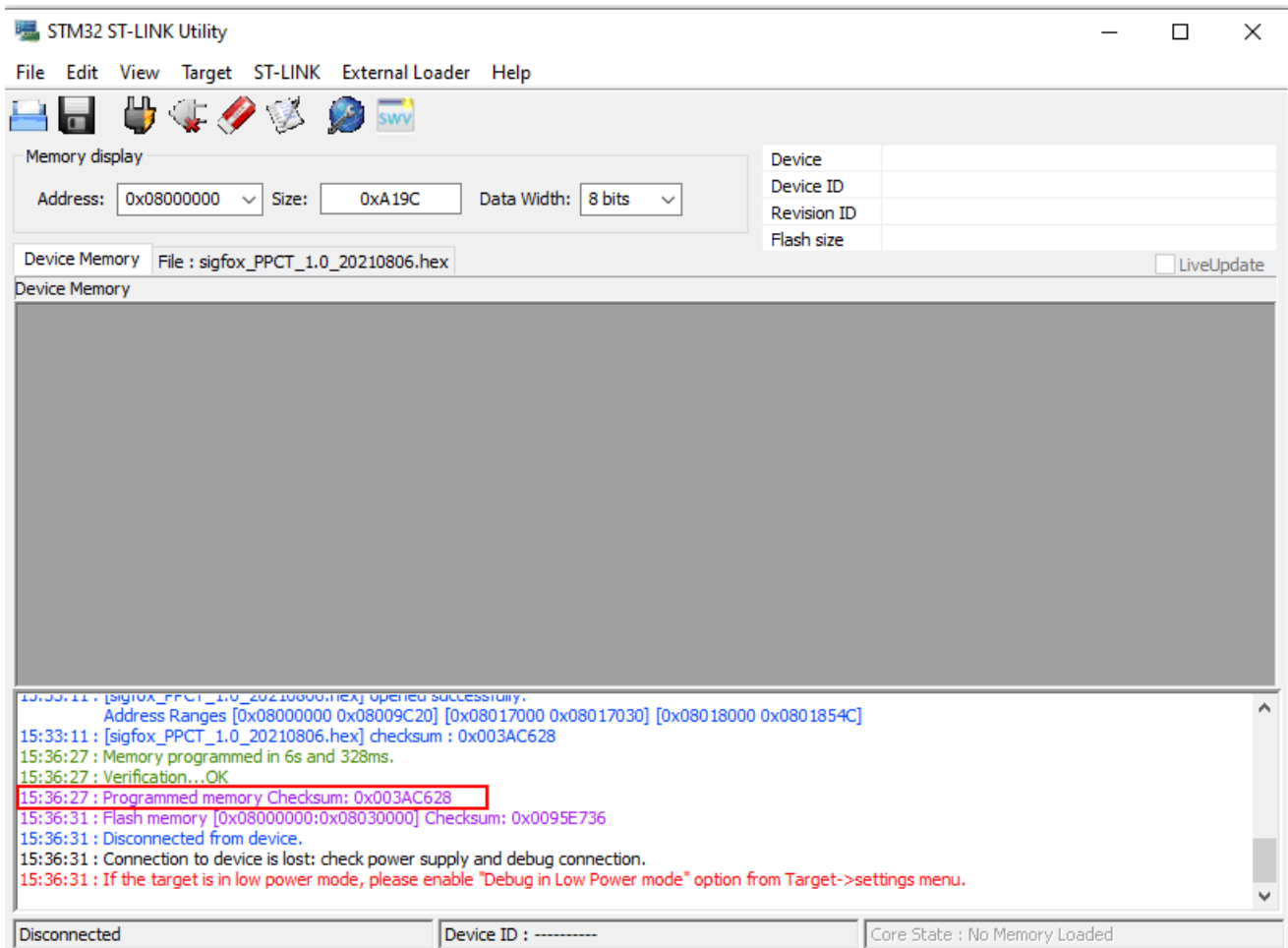


Table 3. Starting a program file to the sensor, Open - Start.



If Programmed memory Checksum equal with the .hex file checksum ==> Succeed

If Programmed memory Checksum not equal with the .hex file checksum ==> Failed