

# Common notes in installation of Sigfox-Ready Sensors

The common instructions for all kinds of Daviteq Sigfox-Ready Sensor. Please see below.

## 1. HOW DO YOU GET A STRONG RF SIGNAL?

To maximize the transmission distance, the ideal condition is Line-of-sight (LOS) between the Sigfox-Ready sensor and the Sigfox Base station. In real life, there may be no LOS condition. However, the Sigfox-Ready sensor still communicates with the Base station, but the distance will be reduced significantly.

**DO NOT** install the wireless sensor or its antenna inside a completed **metallic** box or housing because the RF signal can not pass through the metallic wall. The housing is made from Non-metallic materials like plastic, glass, wood, leather, concrete, and cement...is acceptable.

## 2. INSTALL BATTERIES FOR SIGFOX-READY SENSOR

### 2.1 INSTALL BATTERIES FOR SIGFOX-READY SENSOR WITH BLUE BOX HOUSING

#### RECOMMENDED BATTERIES FOR SIGFOX SENSOR

E91 AA Alkaline battery



L91 AA Lithium battery



-18 .. + 60 oC working temperature

10-year shelf life

3000 mAh Capacity

Price: 1X

-40 .. + 60 oC working temperature

20-year shelf life

3500 mAh Capacity

Price: 3.5X

WSSFC-ULC-H7.PNG

*Steps for battery installation:*

**Step 1:** Using L hex key to unscrew M4 screws at the side of the housing and carefully pull out the top plastic housing in the vertical direction



**Step 2:** Insert 02 x AA 1.5VDC battery, please take note the poles of the battery

**ATTENTION:**



REVERSED POLARITY OF BATTERIES IN 10 SECONDS CAN DAMAGE THE SENSOR CIRCUIT!!!



**Step 3:** Insert the top plastic housing and locking by L hex key

**ATTENTION:**



When reinstalling the cover, pay attention to put the PCB edge into the middle slot of the box inside as shown below)



## 2.2 INSTALL BATTERIES FOR SIGFOX-READY SENSOR WITH WHITE BOX HOUSING, 6 X AA BATTERIES (SENSOR -LPC)

### RECOMMENDED BATTERIES

E91 AA Alkaline battery



-18 .. + 60 oC working temperature  
10-year shelf life  
3000 mAh Capacity  
Price: 1X

L91 AA Lithium battery



-40 .. + 60 oC working temperature  
20-year shelf life  
3500 mAh Capacity  
Price: 3.5X

WSSFC-LPC-H5.PNG

*Steps for battery installation:*

**Step 1:** Use flat head screws to push into 2 reed joints



**Step 2:** Open the housing, then insert 06 x AA 1.5VDC battery, please take note of the poles of the battery

**⚠ ATTENTION:** REVERSED POLARITY OF BATTERIES IN 10 SECONDS CAN DAMAGE THE SENSOR CIRCUIT!!!



**Step 3:** Insert the top plastic housing (Please note the 2 reed joints)



## 2.3 INSTALL BATTERIES FOR SIGFOX-READY SENSOR WITH BLACK BOX HOUSING, 2 X AA BATTERIES (SENSOR -ULA)

### RECOMMENDED BATTERIES FOR SIGFOX SENSOR

E91 AA Alkaline battery



-18 .. + 60 oC working temperature

10-year shelf life

3000 mAh Capacity

Price: 1X

L91 AA Lithium battery



-40 .. + 60 oC working temperature

20-year shelf life

3500 mAh Capacity

Price: 3.5X

WSSFC-ULC-H7.PNG

*Steps for battery installation:*

**Step 1:** Use a screwdriver to open the 4 screws on the underside of the housing





**Step 2:** Open the housing, then insert 02 x AA 1.5VDC battery

**⚠ ATTENTION:** REVERSED POLARITY OF BATTERIES IN 10 SECONDS CAN DAMAGE THE SENSOR CIRCUIT!!!



**Step 3:** Insert the plastic housing and locking the 4 screws by screwdriver



## 2.4 INSTALL BATTERIES FOR SIGFOX-READY SENSOR WITH EXD-

## APPROVED HOUSING WSSFCEX-...

Depends on the design of each device. Each device may need 1 pc of Type C or Type D battery. Please check the specification of that device. We recommend the below batteries to be used with our devices.

LS 26500 Lithium battery



-60°C..+85°C working temperature

Low self-discharge rate

7.7 Ah Capacity

LS 33600 Lithium battery



-60°C..+85°C working temperature

Low self-discharge rate

17.0 Ah Capacity

### Steps for battery installation:

#### **DANGER:**

**DO NOT REPLACE BATTERY AT HAZARDOUS LOCATION!**



**DO NOT OPEN THE COVER AT HAZARDOUS LOCATION!**

**ONLY OPEN COVER AND REPLACE BATTERY IN SAFE AREA!**

**Step 1:** Turn the front cover of the sensor counter-clockwise;



**Step 2:** Carefully take out the front cover of the sensor

**Step 3:** Insert the battery, please take note the polarity of battery

#### **ATTENTION:**



**REVERSED POLARITY OF BATTERIES IN 10 SECONDS CAN DAMAGE THE SENSOR CIRCUIT!!!**





**Step 4:** Turn the front cover of the sensor clockwise to close fully.



**NOTES:**



Using 2mm hex key to lock the cover to prevent the unattended opening.

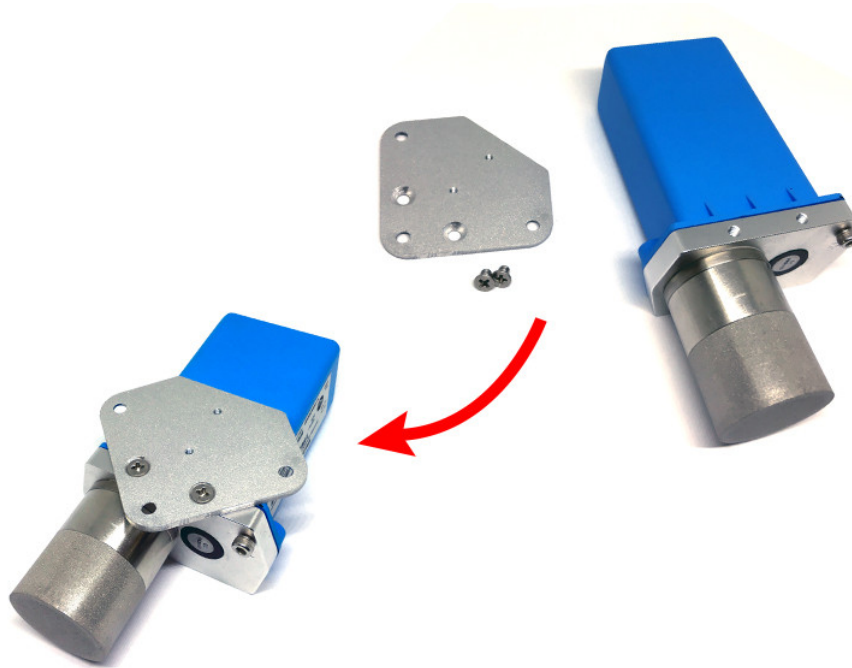


### 3. MOUNTING FOR SIGFOX-READY SENSOR

#### 3.1 MOUNTING FOR SIGFOX-READY SENSOR WITH BLUE BOX HOUSING

The following are the steps for the Sigfox-ready sensor with a Blue box housing design.

**Step 1:** Install the bracket on the sensor



**Step 2:** Determine the mounting position and secure the sensor with the included screws





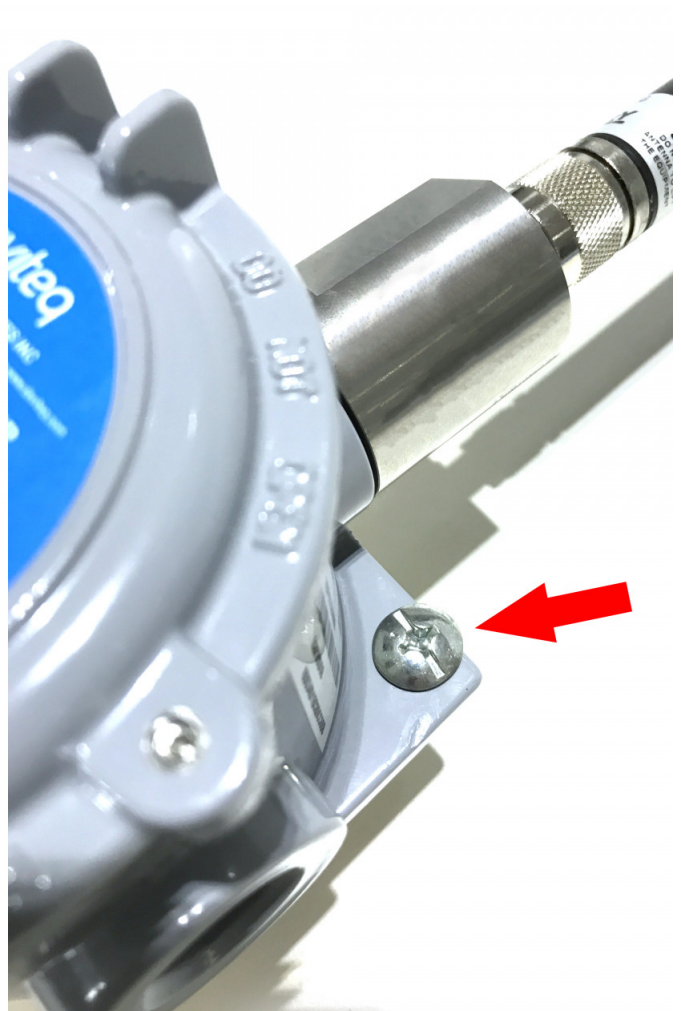
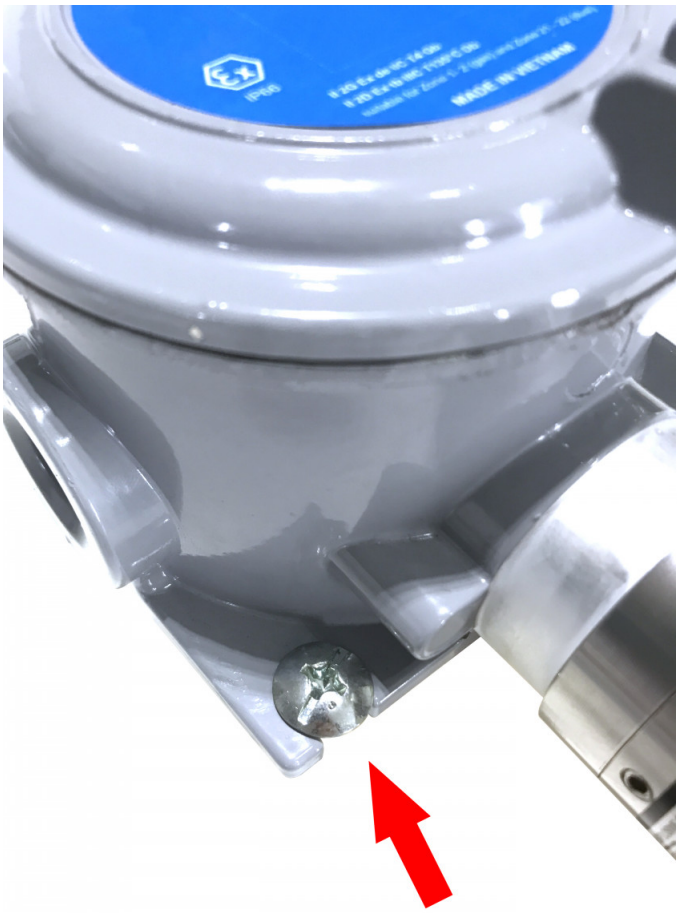
**Step 3:**Grounding the sensor



### **3.2 MOUNTING FOR SIGFOX-READY SENSOR WITH WHITE BOX HOUSING**

### **3.3 MOUNTING FOR SIGFOX-READY SENSOR WITH EXD-APPROVED HOUSING**





## 4. ADDING A SIGFOX-READY SENSOR TO SIGFOX BACK-END SYSTEM

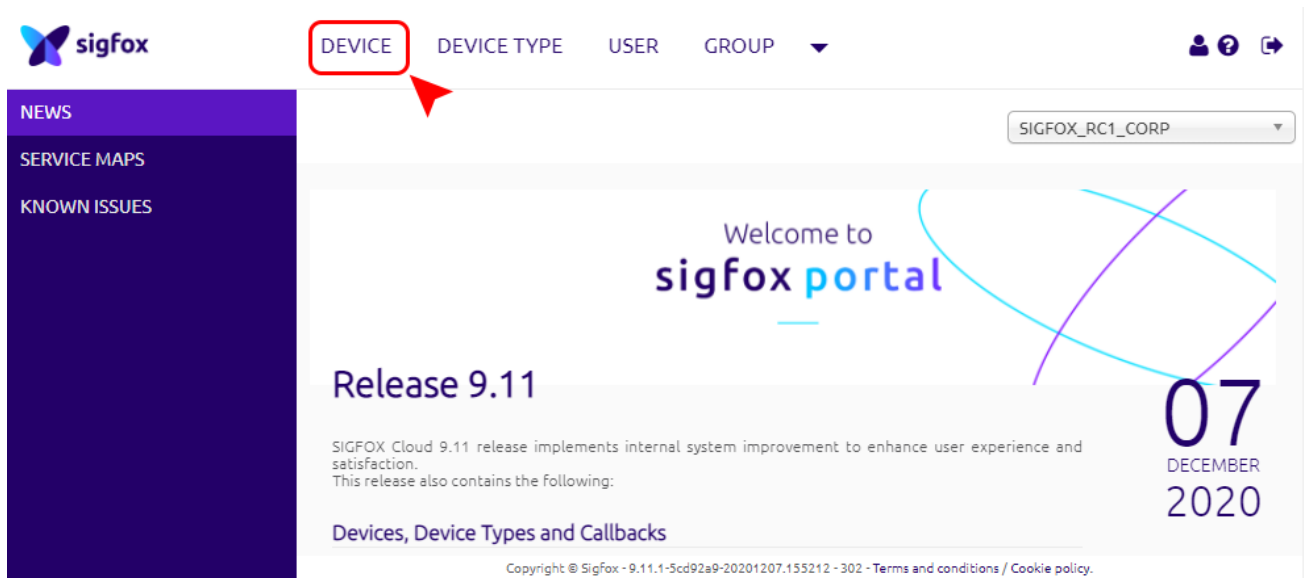
This instruction is applied to all kinds of Sigfox-Ready sensors produced by Daviteq.

**Step 1:** Log in to the sigfox backend website

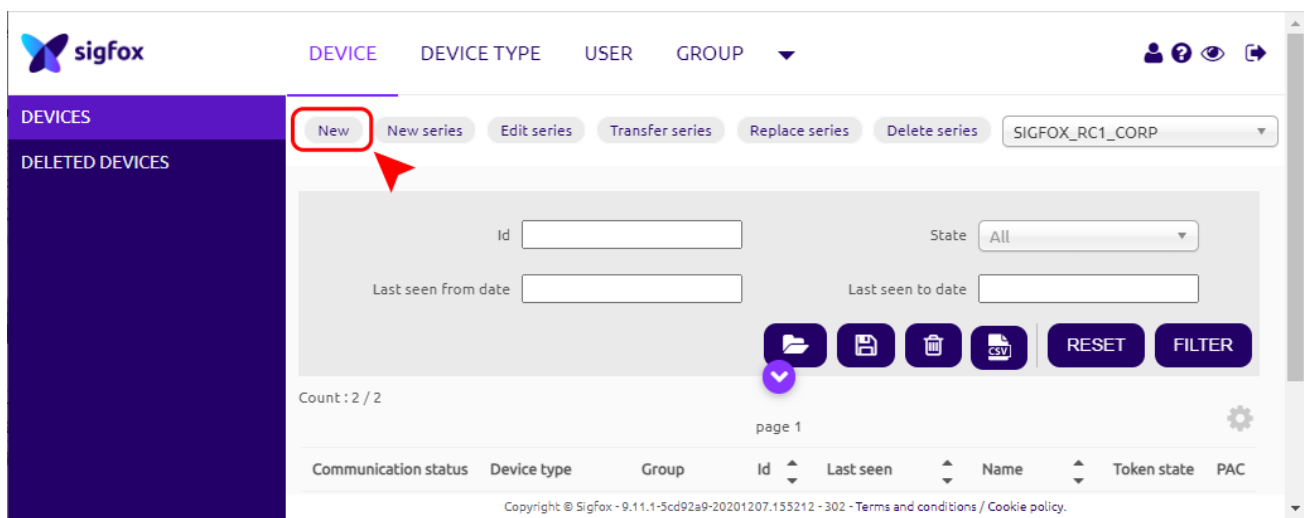
A screenshot of a web browser showing the Sigfox backend login page. The address bar displays "backend.sigfox.com/auth/login". The page features the Sigfox logo at the top left. Below it, there are two input fields: "Email address" with an envelope icon and "Password" with a lock icon. To the right of the password field is a checkbox labeled "Remember me for one week". A "Sign in" button is located at the bottom right of the form area.

**Step 2:** Click on Device

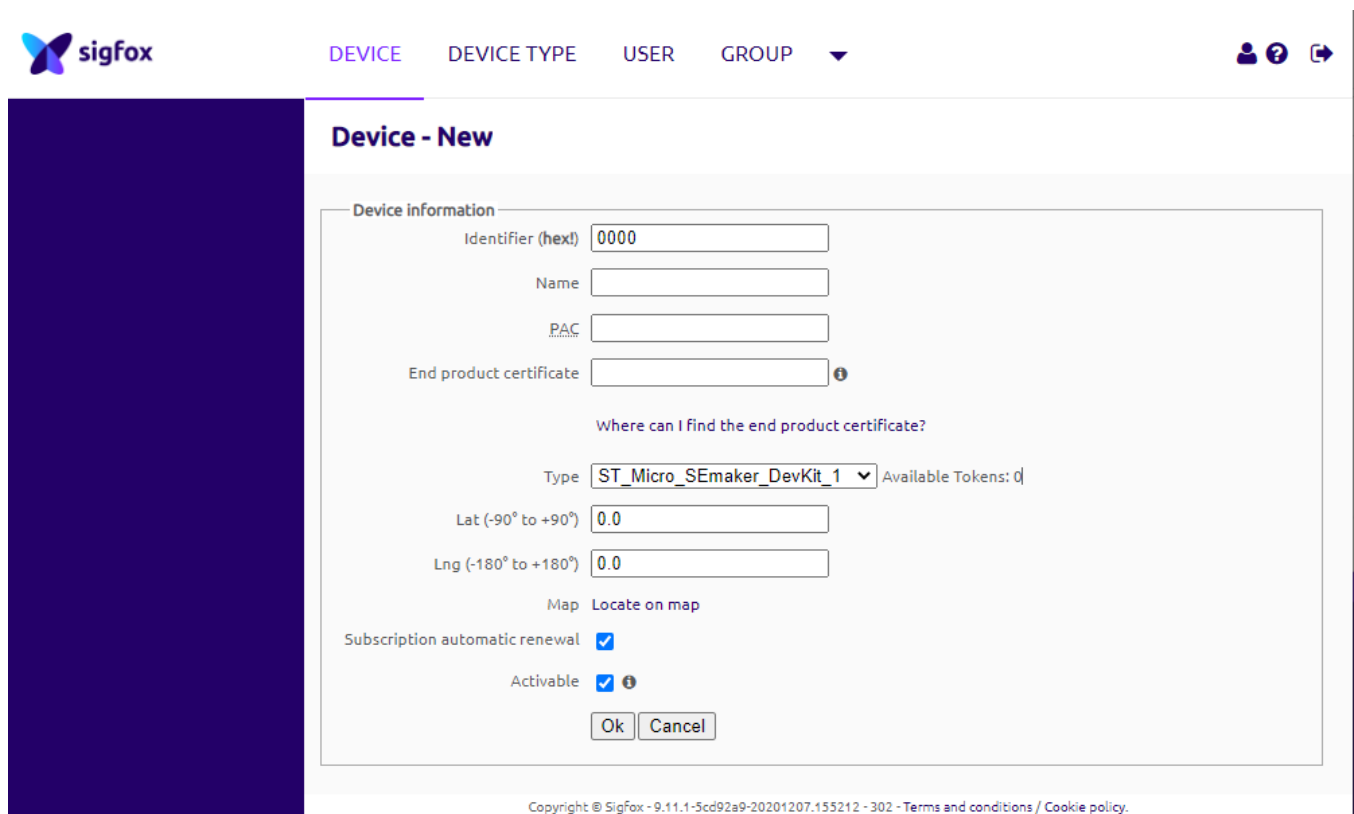




**Step 3:** Click New → Select a group

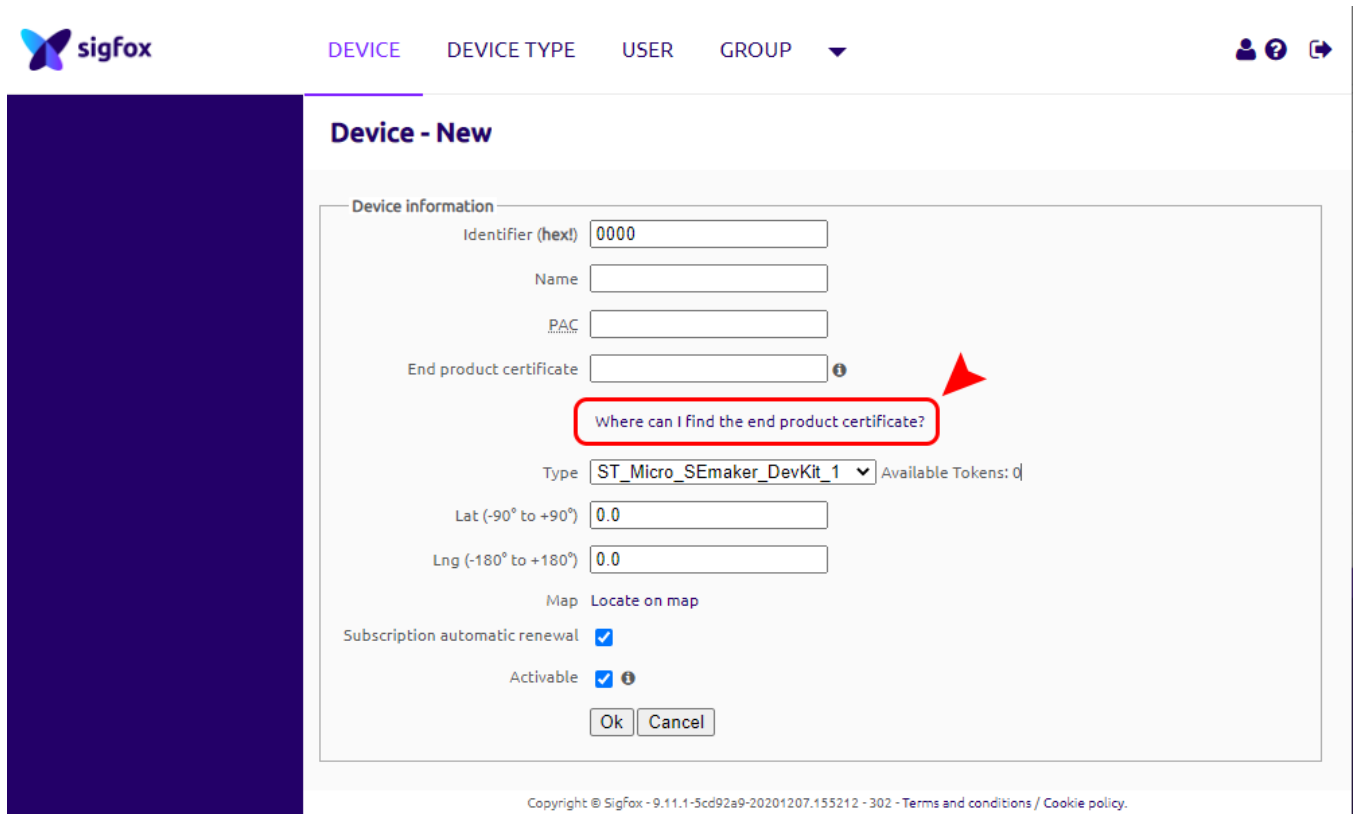


**Step 4:** Fill in the required information



**Note:** Some of our products may not have end product certification in time, to add the product to Backend Sigfox please follow the steps below.

Click on the text as shown below




The screenshot shows the 'Device - New' form in the Sigfox backend. The form is titled 'Device - New' and contains several input fields and checkboxes. A red box highlights the 'End product certificate' field, and a red arrow points to it. The text 'Where can I find the end product certificate?' is written inside the red box. The form also includes fields for Identifier (hex!), Name, PAC, Type (ST\_Micro\_SEmaker\_DevKit\_1), Lat (-90° to +90°), and Lng (-180° to +180°). There are also checkboxes for Subscription automatic renewal and Activable, and buttons for Ok and Cancel.

Device information

Identifier (hex!) 0000

Name

PAC

End product certificate 

Where can I find the end product certificate?


Type ST\_Micro\_SEmaker\_DevKit\_1 Available Tokens: 0

Lat (-90° to +90°) 0.0

Lng (-180° to +180°) 0.0

Map [Locate on map](#)

Subscription automatic renewal ☒

Activable ☒ 

Ok Cancel

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Check the box as shown below to register as a prototype

## Device - New

### Device information

Identifier (hex)

Name

PAC

End product certificate  

#### Where can I find the end product certificate?

The device vendor should provide the end product certificate number. If not, please use the search bar below:

Otherwise you can contact your [Sigfox distributor service desk](#)

If the device has not obtained an end product certificate yet, then you can register as a prototype.

☒ Register as a prototype (remaining prototypes which can be registered in your group: 1000)


Type  Available Tokens: 0

Lat (-90° to +90°)

Lng (-180° to +180°)

Map [Locate on map](#)

Subscription automatic renewal ☒

Activable ☒ 

🔄 Revision #25

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✎ Updated Wed, Nov 30, 2022 3:02 AM by [Kiệt Anh Nguyễn](#)