Qeedji

User manual 001B

SMH300

4.13.14

Legal notice

SMH300 4.13.14 (001B_en)

Rights and Responsibilities

Product information

Product design and specifications are subject to change at any time and `Qeedji` reserves the right to modify them without notice. This includes the hardware, the embedded software and this manual, which should be considered as a general guide to the product. The accessories supplied with the product may differ slightly from those described in this manual, depending on the developments of the various suppliers.

Precautions for use

Please read and heed the following warnings before turning on the power: - installation and maintenance must be carried out by professionals. - do not use the device near water. - do not place anything on top of the device, including liquids (beverages) or flammable materials (fabrics, paper). - do not expose the device to direct sunlight, near a heat source, or in a place susceptible to dust, vibration or shock.

Warranty clauses

The `Qeedji` device is guaranteed against material and manufacturing defects for a certain duration. Check the device warranty duration value at the end of the document. These warranty conditions do not apply if the failure is the result of improper use of the device, inappropriate maintenance, unauthorized modification, operation in an unspecified environment (see operating precautions at the beginning of the manual) or if the device has been damaged by shock or fall, incorrect operation, improper connection, lightning, insufficient protection against heat, humidity or frost.

WEEE Directive

This symbol means that your appliance at the end of its service life must not be disposed of with household waste, but must be taken to a collection point for waste electrical and electronic equipment or returned to your dealer. Your action will protect the environment. In this context, a collection and recycling system has been set up by the European Union

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1 - Description and installation

2 - Configuration

3 - Technical information

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1.1 Introduction

This manual explains how to install and configure your device SMH300.

Recommendations and warnings

This device is designed to be used indoor.

This device is intended to work with the power supply unit. This power supply unit must be connected to a mains socket conforming to standard NF C 15-100. If the AC power cable is damaged, it must be replaced. It is possible to order a power supply unit replacement by sending a request to the email address sales@qeedji.tech.

This device is a Class A device. In a residential environment, this device may cause radio interference. In this case, the user is asked to take appropriate measures.

When powering the device from a PoE source, this PoE source must be "Limited Power Source" as defined in EN60950-1: 2006.

The Bluetooth system operates in the 2.4 GHz ISM[1] frequency bands, the operation of which does not require a licence due to the low transmission power and the low risk of interference. This frequency band is between 2402 and 2 480 MHz.

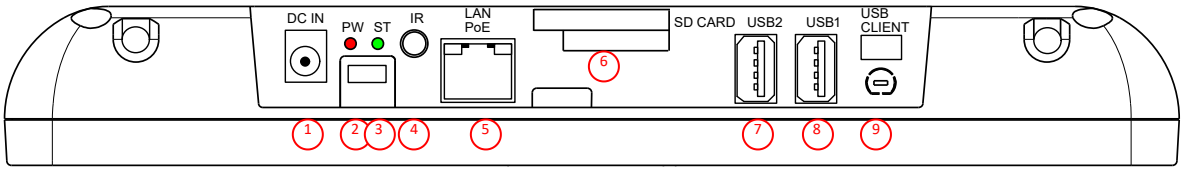
[1] *Industrial, Scientific and Medical.*

Content of the package

Items	Description	Quantity
Device	SMH300 with Gekkota embedded.	1
Power supply unit	12V power supply unit with cable of 1.2m.	1
Labels	One on the cardboard packaging and another one at the back of the product. *Additional label can be present in case build-in options.*	2

1.2 Getting started with the device

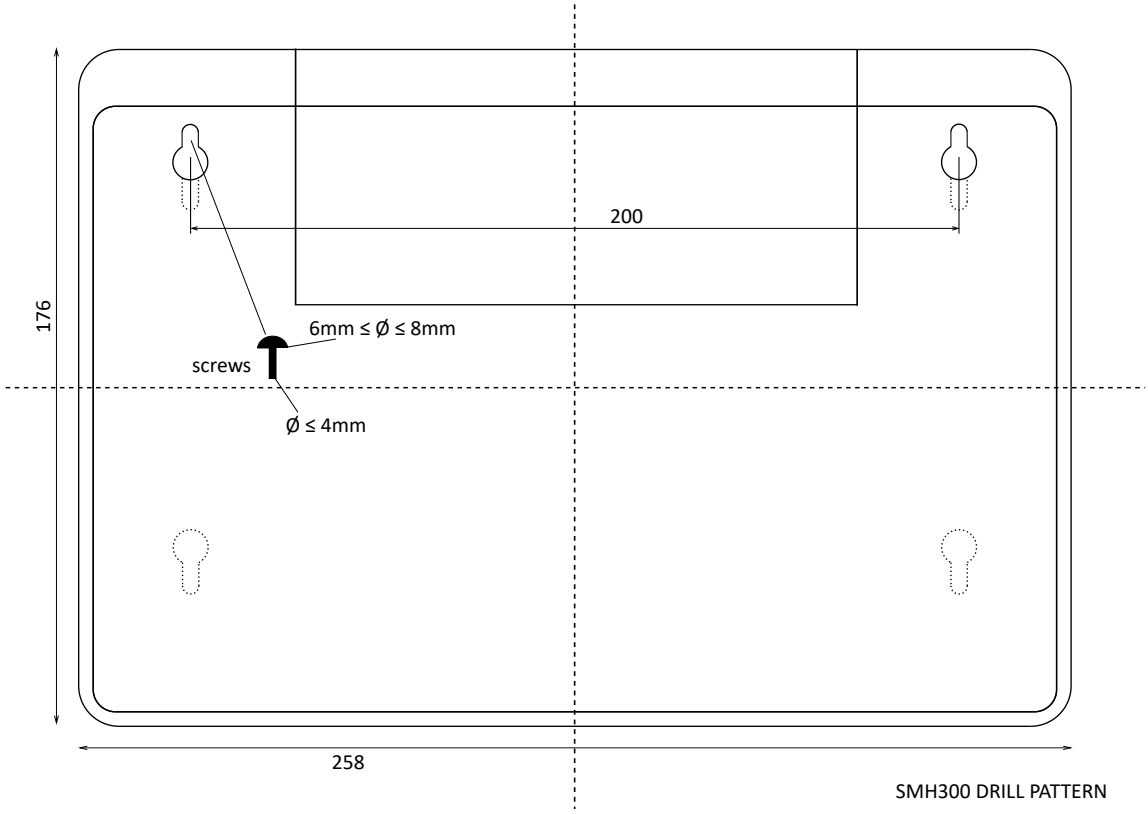
Top face



- (1) Power supply 12V DC,
- (2) Power supply red LED,
- (3) Status green LED,
- (4) GPIO1/IR connector,
- (5) LAN PoE RJ45 connector,
- (6) SD Card connector,
- (7) USB2 2.0 Host connector,
- (8) USB1 2.0 Host connector,
- (9) WLAN antenna slot.

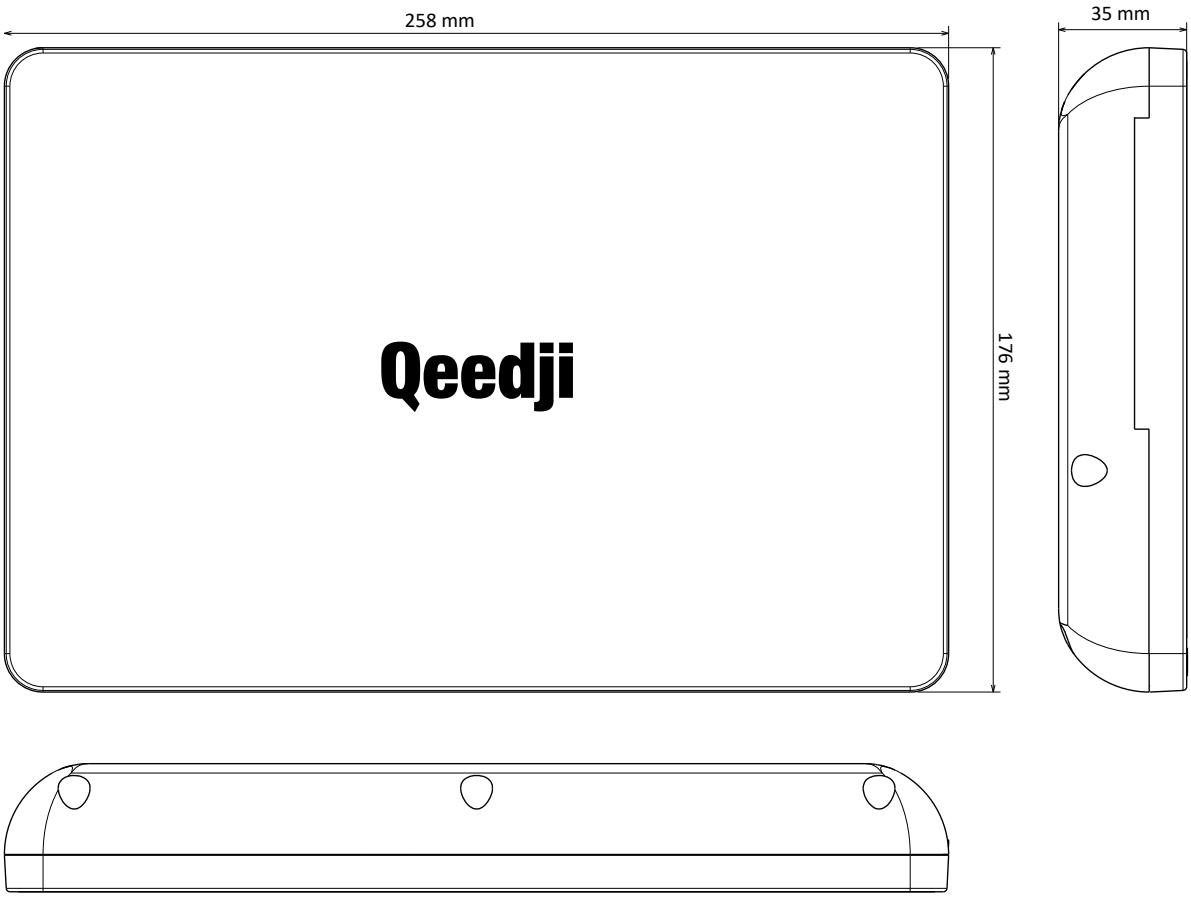
1.2.1 Device fixture

The bottom of the smh300 if often fixed at 220 cm far from the floor, oriented in the right sense, meaning cable output oriented towards the ceiling.



SMH300 DRILL PATTERN

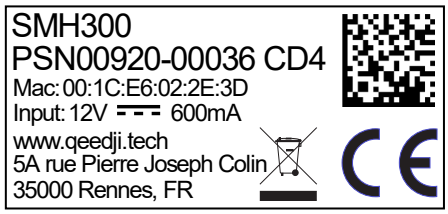
1.2.2 Device dimensions



1.2.3 Labelling

☛ *The serial number of the device can be requested in case of technical support.*

The model of the device, the power supply characteristics, the serial number (PSN) and the MAC address are written on labels which are stuck on the case.

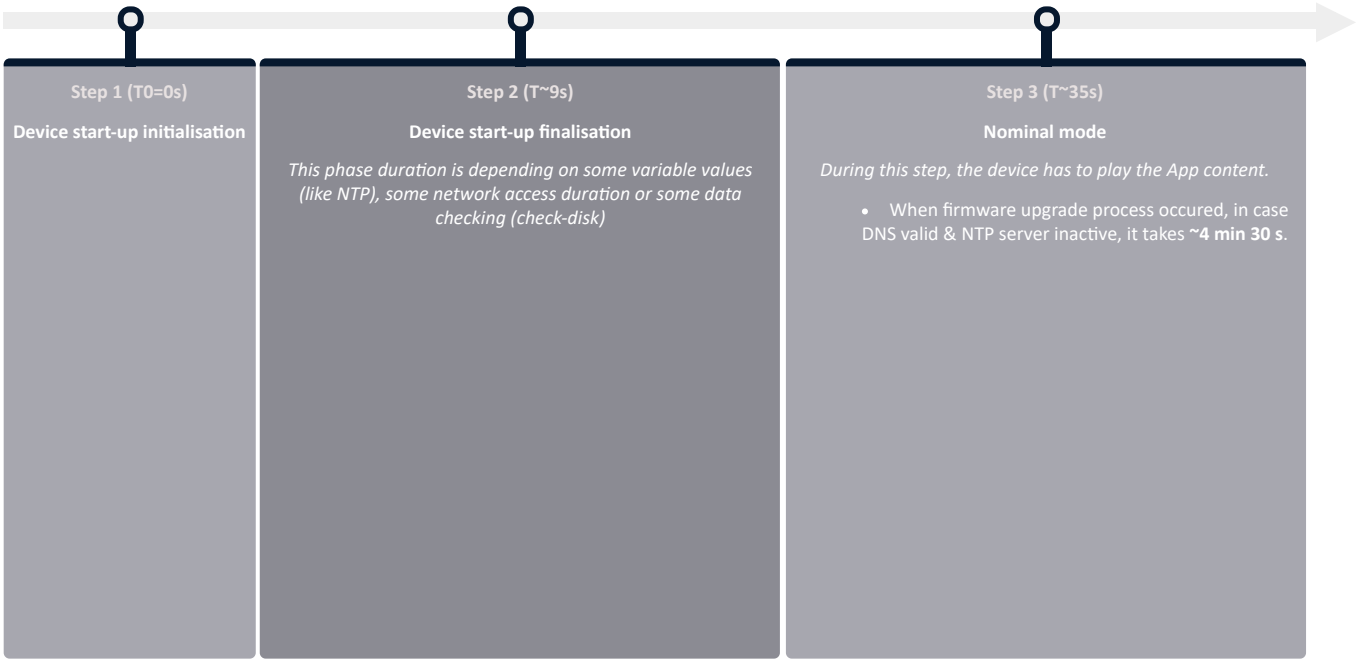


This is the label stuck also on the cardbox. They are showing information on:

- the device model,
- the serial number (PSN).

Some additional labels may be present in case of built-in options.

1.2.4 Device start-up step



1.3 LEDs behaviour

LED POWER behaviour (power on device)

State	Information
Red	**OK: Power supplied**
Off	**Error: Power supply issue** [1]

LED LAN behaviour (power on device)

State	Information
Off	There is no network traffic on the Ethernet connector
Blinking	The blinking frequency is indicating the data rate on Ethernet connector

LED STATUS behaviour depending on device start-up steps

- **Step 1: Device start-up initialisation**

State	Information
Green: continuous	**OK**
Always Off	**Error: Power supply issue** [1]

- **Step 2: Device start-up finalisation**

State	Information
Off	**OK**. This step duration can be from several seconds to several minutes.
Green blinking: 1 second duration flash and periodicity every 2 seconds	**Error: Boot issue** [1]

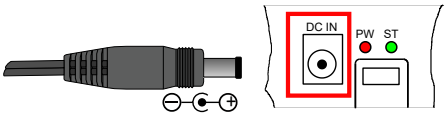
• **Step 3: Nominal mode**

State	Information
Green blinking: **1** very short flash (300 ms) spaced 4 seconds apart	**OK**
Green blinking: **2** very short and consecutive flashs (300 ms) spaced 4 seconds apart	**Warning: Fail Soft Mode Level 1** Frequent device reboot detected (for example 4 times in less than ½ hour) Fail Soft Mode message is written on the device status.xml. The instability has been caused probably by a content media not yet supported by the Gekkota OS. Consequently, to prevent any further reboot, the content has been invalided. You are invited to remove the deficient media from your App and publish again to go ahead. [2]
Green blinking: **3** very short and consecutive flashs (300 ms) spaced 4 seconds apart	**Warning: Fail Soft Mode Level 2** Frequent device reboot detected (for example 4 times in less than ½ hour) Content is purged Fail Soft Mode message is written on the device status.xml. The instability has been caused probably by a content media not yet supported by the Gekkota OS. Consequently, to prevent any further reboot, the content has been invalided. You are invited to remove the deficient media from your App and publish again to go ahead. [2]
Green blinking: **4** very short and consecutive flashs (300 ms) spaced 4 seconds apart	**Warning: Check disk** The device has detected memory corruption on content storage. The media storage is being repaired. This repair step is called Check-Disk and its duration can be several minutes. During this step, the “checking the file system of data partition in progress” message is written on the device status.xml [3]
Green blinking: **5** very short and consecutive flashs (300 ms) spaced 4 seconds apart	**Warning: errors on system partition** The user has to connect to device WebUI, go to *Maintenance > Tools* menu, and press button *Format* or *Repair* to solve the problem. [3]
Green blinking: **6** very short and consecutive flashs (300 ms) spaced 4 seconds apart	**Warning: a firmware upgrade is pending** During this phase, no content is played on the device, **do not switch OFF the device.**
Green blinking: **7** very short and consecutive flashs (300 ms) spaced 4 seconds apart	**Error: write problem on the storage** For an unknown reason, your storage space isn't usable any more. [3]
Off	**Error**. [1]

[1] If the problem persists in despite of an appropriate power-supply, contact support@qeedji.tech.
[2] If the problem persists, it is recommended to find out the media not supported yet by the system and remove it from content.
[3] If the problem persists after a partition repairing, contact support@qeedji.tech.

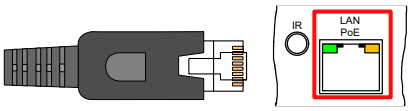
1.4 Connectors pin-out

Power supply connector (12VDC-1.2A)

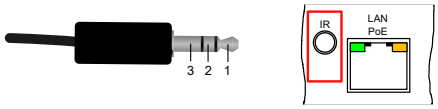


LAN connector

Ethernet RJ-45 PoE. 10/100 BaseT. It is recommended to use shielded cables.



Jack 3.5 mm connector (GPIO1)



N°	Name	Write/Read	Control
1	Voltage reference 3.3V		
2	GPIO1	IN or OUT	CPU/GPIO1
3	Ground		

Electrical features

	Vin min	Vin max	VOH min	VOL max	VIH min	VIL max
GPIO1	-0.5V	3.6V	2.9V	0.4V	2.0V	0.8V

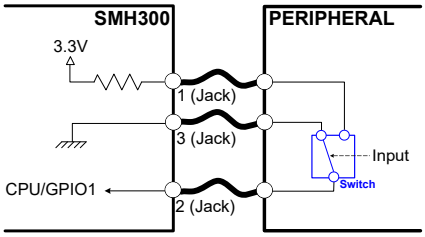
The 3.3V pin must not be used as a power supply, but rather as a reference voltage.

During boot, the GPIO is configured in input during some seconds. And then after the system startup, the GPIOs is operational.

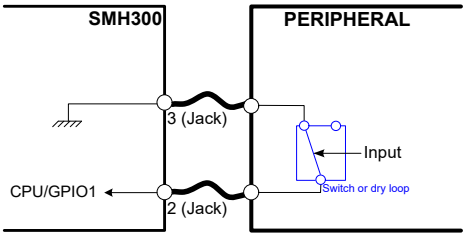
The GPIO has a weak pull-up.

It is not recommended to hotplug/unplug the GPIO1 connector, which could damage the device.

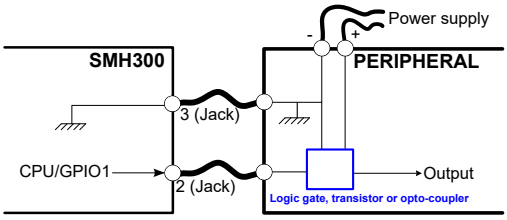
Three wires input configuration for GPIO1:



Two wires configuration for GPIO1:



Output configuration for GPIO1:



2.1 Configuration Web interface

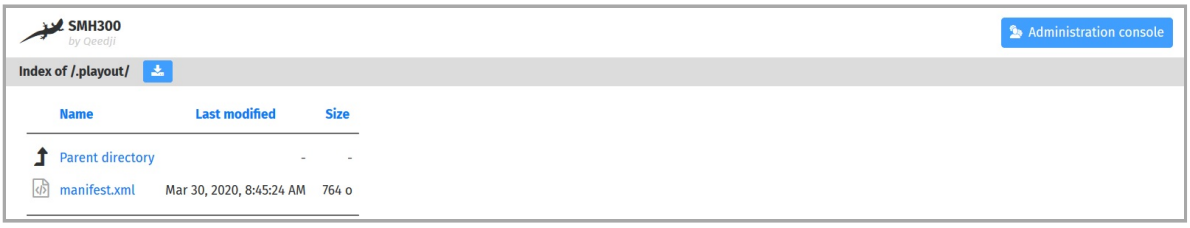
The SMH300 device has a Web-based configuration interface that can be accessed with a Web browser. The supported browsers are: `Google Chrome` , `Mozilla Firefox` , `MS-Edge` and `MS-Edge (Chromium)` .

It is accessible from the URL:

```
http://<device_IP_addr>/
```

By default, the login credentials for the configuration Web interface and the Web server are:

- login: `admin` ,
- password: `admin` .



WebDAV directories

Clicking on the parent directory provides access to the root of the device's WebDAV server, which provides access to directories, among other things:

- `.playlog/` : location to store data for mediametry,
- `.resources/` : location to store the resources of the configuration Web interface,
- `.software/` : location to store `.frm` middleware for updates,
- `.status/` : location to store the device status file `status.xml` ,
- `.upnp/` : location to store `device.xml` device status for upnp detection,
- `.assets/` : location to store some of the resources of the configuration Web interface,
- `.playout/` : location to store the App is hosted when deployed on the device,
- `.log/` : location to store the application logs, when they are activated.
- `.output/` : location of the respective ppk contents for the 10 SLATES device. This directory contains also a *screenshot.jpg* file, capture of the last viewport content. This file allows to show information message or error message. In case an information message is displayed (like *Error: invalid license* or *Information: no content*), the `hub.ppk` content could not be updated.

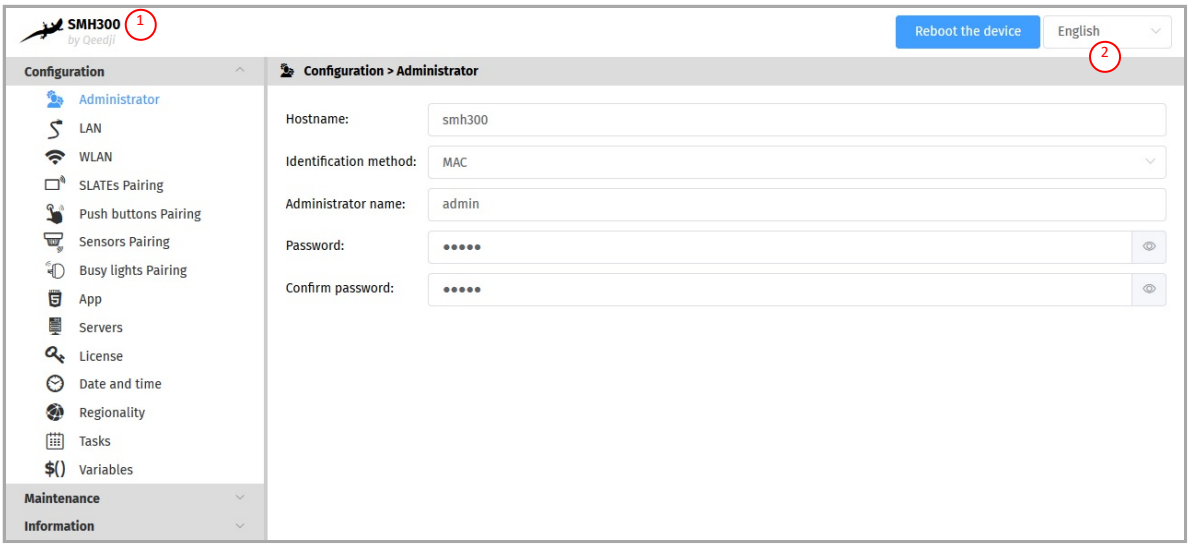
Content update Once paired to a SMH300, with the `Index` from 1 to 10, the SLATEs are programmed to get their new respective .ppk content to display on these `SMH300` hub WebDAV directories:

- `http://<SMH300_IP_Addr>/.output/<index>/hub.ppk` .

Click on a `hub.ppk` content (propriety format) since a Web browser to view it.

Administration console

Click on the `Administration Console` button to access the device configuration interface.



With the button at the top right corner (1), choose the language in which your Web interface should be displayed. The supported languages are:

- *English*,
- *Spanish*,
- *German*,
- *French*.

> ⚠ It is desirable that your device SMH300 is on time. When possible, do synchronize it with an NTP server.
>
> ⚠ After you have changed and saved all your settings in the different panes, be sure to perform a device restart by clicking the `Reboot the device` button so that your changes are fully reflected.

Click on the device logo (2) at the left top corner to return to the main page.

⚠ If the device does not respond to its IP address, either the device power supply is unplugged, or the Ethernet cable is not connected, or the network configuration is not properly adjusted. To solve the problem, if your computer and local network supports IPV6, connect an Ethernet cable on the device and connect to the device Web interface with its IPV6 address.

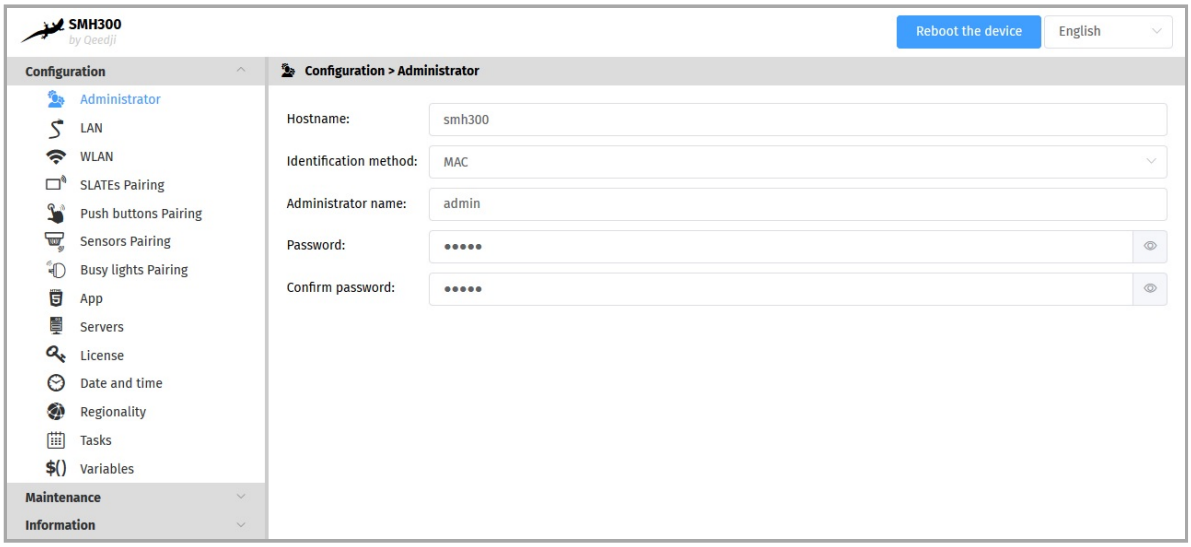
```
For example, for the MAC address value: ``00-1c-e6-02-1e-45`,
In a Web browser, enter the URL: http://[fc00::21c:e6ff:fe02:1e45]/.admin/
```

> To obtain the application note reminding some notions about IPV6 configuration, click on the link to the `Qeedji` site

2.1.1 Configuration > Administrator

In the `Configuration` pane, select the **Administrator** menu to change:

- the hostname,
- the login credentials,
- the device identification method:
  - `MAC` (default),
  - `Hostname` ,
  - `UUID` .

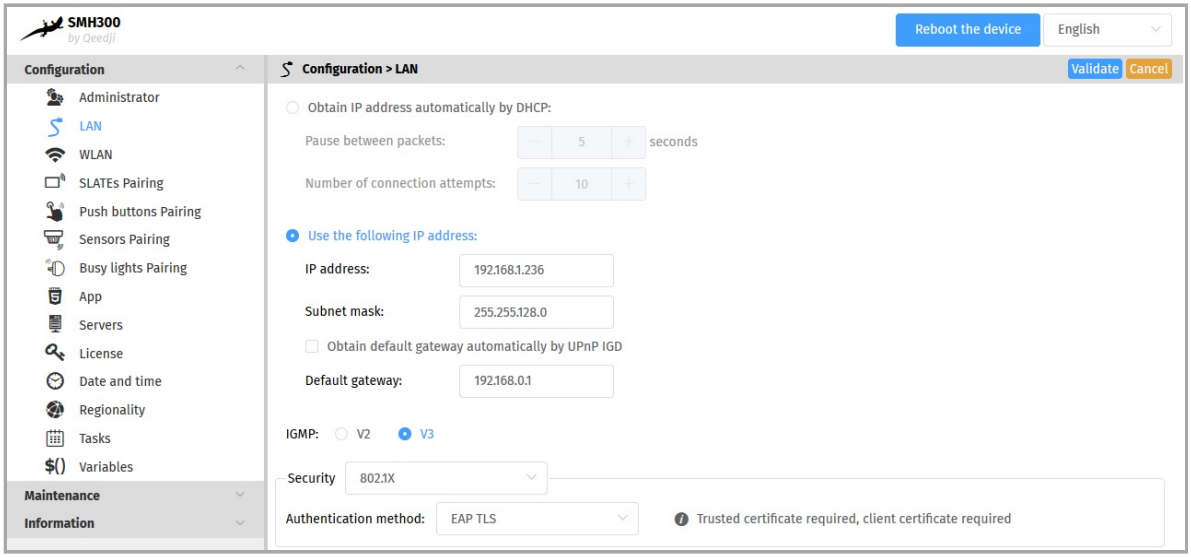


For security reasons, it may be useful to change the login credentials for the device's configuration Web interface. Please keep these login credentials in a safe place afterwards.

It is recommended that you enter one unique `Hostname` value for each device. In case several SMH300 devices are located in different buildings or geographical locations, we recommend that you enter hostname values with information about the building and the location (e.g. `Hall-RD-Paris-1`).

2.1.2 Configuration > LAN

In the `Configuration` pane, select the **LAN** menu to set up the network configuration of the `LAN` interface of your device:



If your device is not located in a secure network, select:

- security: *None*.

If your device is located and properly declared in a secure network, select `802.1X`, then select an `802.1X` authentication method supported by your RADIUS server:

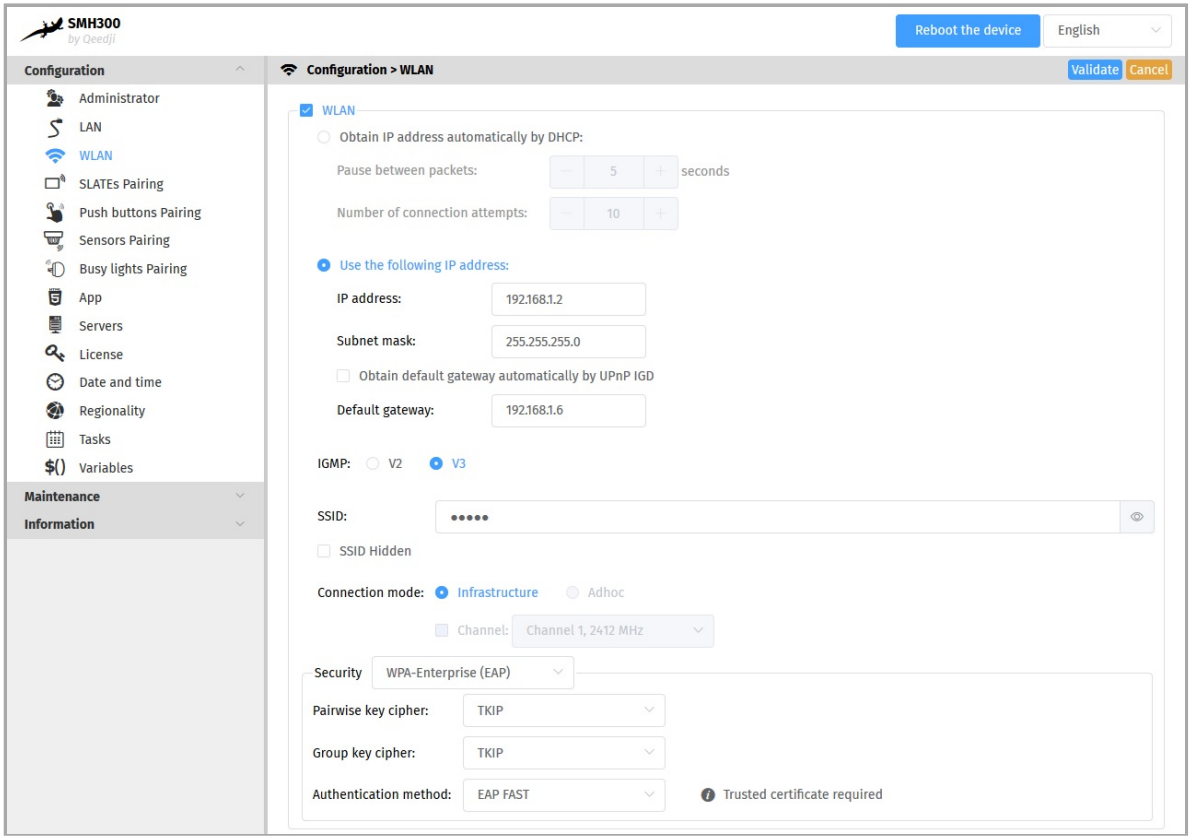
- security: *802.1x*.

> ☛ *In the context of a secure network, your device must first be declared to your dedicated RADIUS server. Some identification methods require you to add a `trusted certificate` (the one used by your RADIUS server) and/or a `client certificate` (generated with the MAC address of your device and the trusted certificate of the RADIUS server); For more information, please contact your IT department.*
>
> ☛ *When using a 802.1X certificate with an expiration date, in case your device is not on time or when the expiration date has expired, the device is not able to access the network anymore. To work around, you have to insert one USB stick containing a specific configuration script to set either a new certificate or update the device date and time.*
>
> ☛ *By default, the device is configured with DHCP activated. In case the DHCP server is not available, after the DHCP timeout, the device ends up using the static IP address whose the default value is 192.168.0.2 when it has not been changed yet by the end user.*

2.1.3 Configuration > WLAN

From the `Configuration` pane, select the **WLAN** menu to set up the network configuration of the `WLAN` interface on your device.

> ☛ *The `WLAN` menu is only displayed when the `WLAN` option is supported by your device.*



- `Connection mode` :
  - infrastructure: Allows you to establish a WIFI connection between your device and a WIFI router:
    - `Security` :
      - *None*,
      - *WEP*,
      - *WPA-Personal (PSK)*,
      - *WPA2-Personal (PSK)*,
      - *WPA-Enterprise (EAP)*,
      - *WPA2-Enterprise (EAP)*.
  - adhoc: Allows you to establish a direct WIFI connection between your device and e.g. your computer, without using a router.
    - `Security` :
      - *None*,
      - *WEP*.

The `SSID Hidden` option tells to the device whether or not the SSID value is broadcast over the network by your WIFI router. It also allows you to deduce the subset of `pair key encryption` and `group key encryption` modes supported.

The maximum lengths for WLAN crypto keys are:

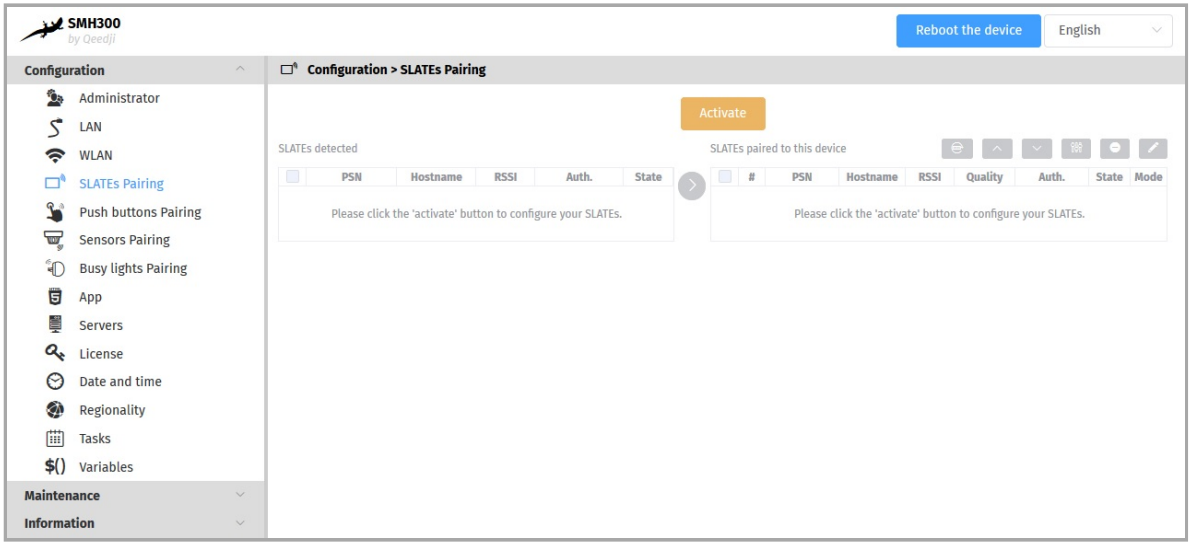
- for `WEP` key:
  - 26 hexadecimal characters max.
- for `WPA-Personal (PSK)` and `WPA2-Personal (PSK)` keys:
  - 63 ASCII characters max.

> ☛ *`TKIP` pair (or group) key encryption is not supported if the router is in `IEEE 802.11n` mode.*
>
> ☛ *`Adhoc` connection is not supported by all computer types. For more information, contact your IT department.*
>
> ☛ *Selecting the WPA-Enterprise (EAP) or WPA-Enterprise (EAP) security implies that your device is located in a secure network, and therefore connects to a properly configured WIFI router with a dedicated RADIUS server. Your device must first be registered inside your dedicated RADIUS server. Some `identification methods` may require you add a `trusted certificate` (the one used by your RADIUS server) and/or a `client certificate` (generated with the MAC address of your device and the trusted certificate of the RADIUS server); For more information, please contact your IT department.*

The `WLAN` interface is not checked by default.

2.1.4 Configuration > SLATEs pairing

In the `Configuration` pane, select the menu **SLATEs pairing** to pair the SLATEs devices to your SMH300 device.



The SMH300 device is designed to work with at least one and up to 10 SLATEs.

> ⚠ In case you are using an already installed SMH300 device, it is recommended double check its heartbeat configuration before starting any configuration. For further information, refer to the chapter §Common preferences. In the factory configuration, the SMH300 device is configuring the SLATEs so that they are waking up every 15 minutes.
>
> ⚠ In case several SMH300 devices are required, think to not install them at the same place else they could interfer each other.

Prepare SLATE pairing configuration

> ⚠ Before starting any SLATE pairing, ensure that your device is on time.

To pair properly one or several slates devices to your smh300 device, you need to prepare for each SLATE PSN (Product Serial Number):

- a specific `Index` : between 1 and 10,
- a specific `Hostname` : max: 8 alphanumeric digits,
- an optional pairing `PIN code` : 0000 .. to 9999.

In case you had to use several SMH300 devices, prepare the same information for all of them.

For example, when the SLATEs are installed in different meeting rooms, and different buildings:

Building A:

SMH300 Hostname	Meeting room name	SLATE PSN	slate #	slate hostname	slate pairing PIN Code
smh300-buildA	`Sales`	00900-00050	1	`Sales`	none
smh300-buildA	`R&D`	00900-00051	2	`R&D`	1234
smh300-buildA	`Director`	00900-00052	3	`Director`	none
smh300-buildA	`Berlioz`	00900-00053	5	`Berlioz`	none

Building B:

SMH300 Hostname	Meeting room name	SLATE PSN	slate #	slate hostname	slate pairing PIN Code
smh300-buildB	`Prod`	00900-00054	1	`Prod`	none
smh300-buildB	`Havana`	00900-00055	3	`Havana`	none
smh300-buildB	`Valley`	00900-00056	5	`Valley`	none
smh300-buildB	`Paris`	00900-00057	7	`Paris`	none

> ☛ In case only few slate devices are used, do prefer use the lower `Index` (1, 2, 3, ...), whose the .ppk content is updated first, before using the higher `Index` (..., 9, 10).

SLATEs configuration

In the default configuration, the SMH300 is configured to work with SLATEs in the nominal configuration:

- Wake-up policy:
  - *every quarter of an hour*,
  - *9.00 AM-7.00 PM*,
  - *5/7 days*.
- `Slate Message Overlay` : not activated,
- `Slate Maintainer` : not activated,
- `Touch keys` : not activated,
- `NFC badging` : not activated,
- Extend interactivity for custom App: not activated.

As soon as a SLATE is paired to a SMH300 device, it inherits of the configuration file `APPLI.CFG` provided by the SMH300 device. So before starting any pairing procedure, check attentively the SMH300 device configuration for the SLATE.

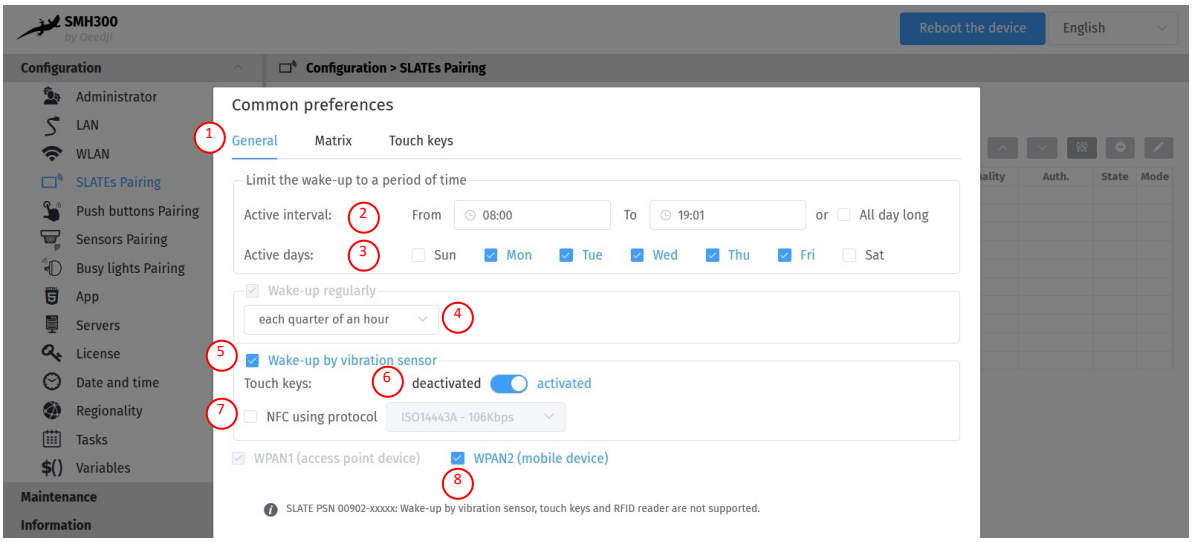
If the nominal configuration is correct, go directly to the chapter § Pairing procedure.

Else press on `Activate` button.

> ☛ *Some SLATEs are appearing in the `SLATES not paired to this device` table.* Press on the `Common preferences` button.

Common preferences:

Select the `General` (1) tab.



The interface supports several field to define the SLATE wake up policy, where they are allowed update their content, install a new software release, or apply a new configuration.

a) Wake up policy:

The `Limit the wake-up to a period of time` fieldset allows to define the timeslot in which the SLATE can wake-up:

- `Limit the wake-up to a period of time` :
  - the `Active interval` [1] (2),
    - *All day long*,
    - From *hh1:mm1* to *hh2:mm2*,
  - the `Active days` [2] (3):
    - *Sunday*: deactivated by default,
    - *Monday*: activated by default,
    - *Tuesday*: activated by default,
    - *Wednesday*: activated by default,
    - *Thursday*: activated by default,
    - *Friday*: activated by default,
    - *Saturday*: deactivated by default.
- The `Wake-up regularly` fieldset, which is always activated, is defining the wake up periodicity (or heartbeat) inside the timeslot defined above:
  - *Each quarter of an hour* (4): the SLATE wakes up every quarter of an hours (..., 2.00 PM, 2.15 PM, 2.30 PM, 2.45 PM, 3.0 PM, 3.15 PM, ...)
  - *By interval* (4): 15 .. 1440 (minutes).

[1] *The `Active interval` must be at least 15 minutes. Outside the `Active interval` , the device is in `sleep` mode and does nothing and can not be woken up by vibration.*

[2] *At least one day must be activated.*

> ⚠ So that the wake up policy is working properly, the smh300 `SMH300` hub needs to be on time.
>
> ⚠ Be careful when you are programming a new wake-up policy. Indeed, progamming an unexpected value for the wake-up may configure the SLATE to only wake-up when there are no people at all at the office !!

b) Vibration, touch key, NFC:

The `Wake-up by vibration sensor` (5) fieldset allows to activate vibration wake-up events to support for example:

- Slate Message Overlay,
- Slate Maintainer.

When the `Wake-up by vibration sensor` (5) fieldset is activated, it allows to activate support for:

- Touch keys[3] (6),
- NFC using protocol[3] (7):

- `ISO14443-A - 106 kbps` (default value),
- `ISO14443-B - 106 kbps` ,
- `JEWEL - 106 kbps` ,
- `FELICA - 212 kbps` ,
- `FELICA - 424 kbps` ,
- `DEP - 106 kbps` ,
- `DEP - 212 kbps` ,
- `DEP - 424 kbps` .

[3] *The support for Touch key and NFC reader requires that* `Wake-up by vibration sensor` *is activated.*

The `WPAN1 (access point device)` field is always activated. It allows to activate the WPAN1 channel used between the SLATE and the SMH300 device.

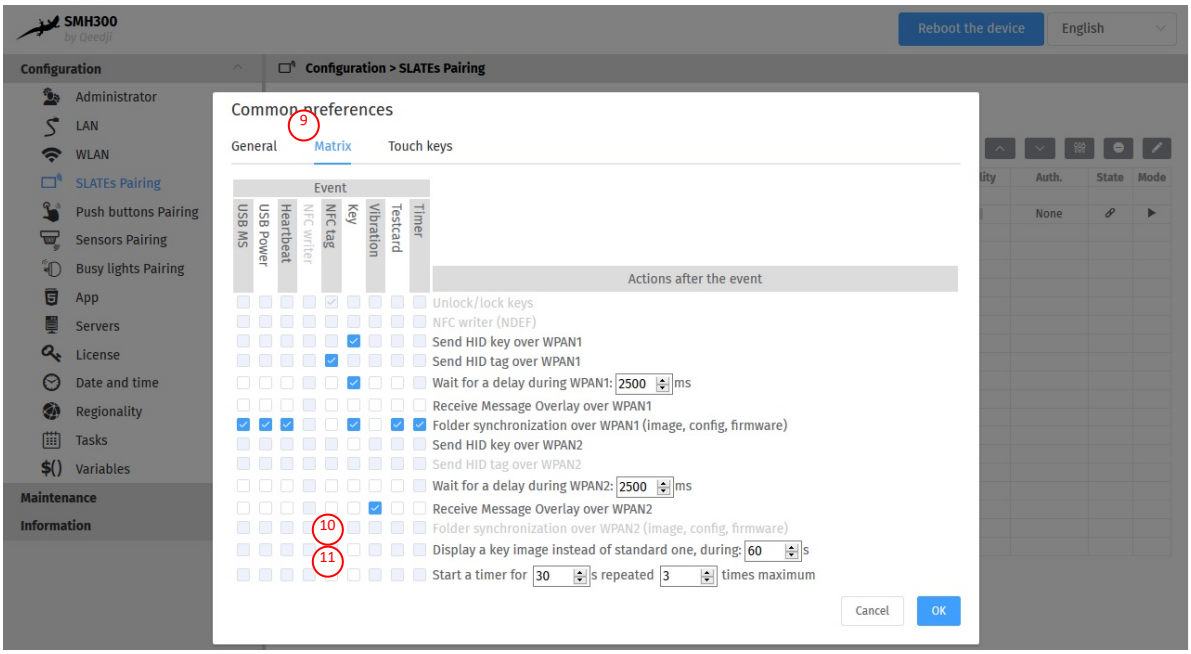
The `WPAN2 (mobile device)` (8) field is activated in the default configuration. Deactivating the support for WPAN2 channel prevent to work with `Slate Message Overlay` and `Slate Maintainer` mobile applications. The support for the mobile application requires that `Wake-up by vibration sensor` is activated.

Matrix:

Select the `Matrix` (9) tab.

a) Default configuration:

This is the default configuration:



b) Wake up event:

The `Matrix` tab allows to customize the behaviour of the pictureframe application depending on the wake-up events which are:

- after the `USB MS` event: wake-up by an USB cable plug,
- after the `USB Power` event: wake-up by an USB power tank plug,
- after the `Heartbeat` event: wake-up by internal timer,
- after the `NFC writer` (RFU) event: wake-up by NFC writing,
- after the `NFC tag` event: wake-up by NFC badging,
- after the `Key` event: wake-up by key press,
- after the `Vibration` event: wake-up by SLATE taping,
- after the `Test card` event: wake-up by `Test card` activation,
- after the `Timer` event: allow to trig several wake-up with a defined period.

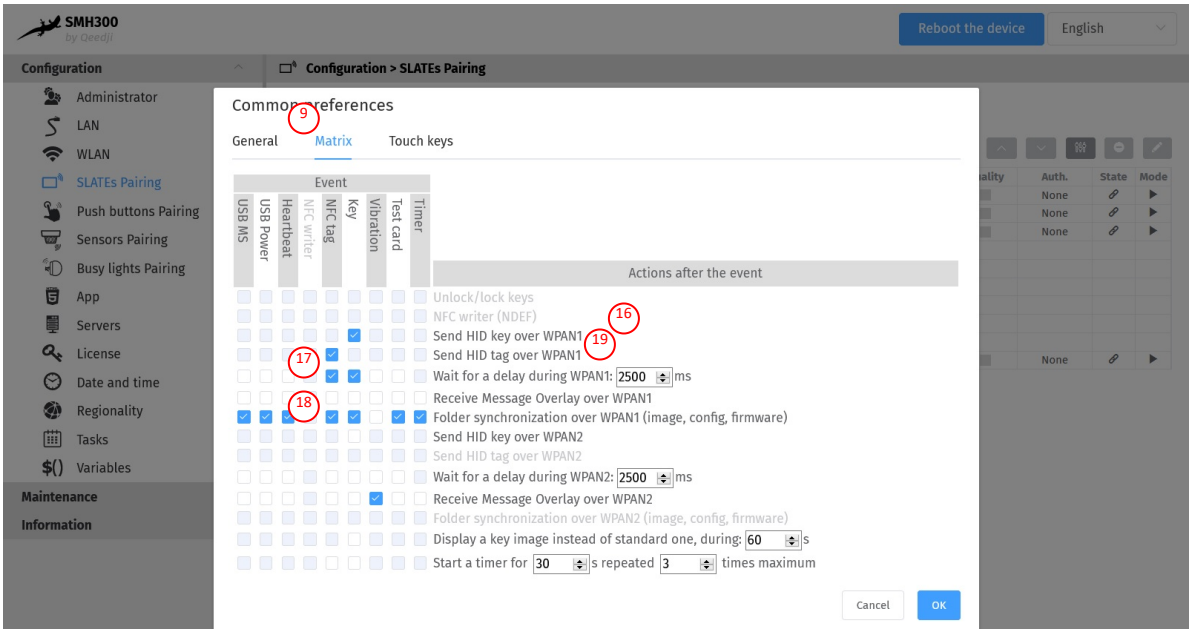
c) Configuration to communicate with `SMH300` hub:

- `Send HID key on WPAN1` (16): allows to transmit the keycode of the key pressed on the SLATE to the SMH300 device.

> ⚠ *In this case, the following actions must be activated after HID key: `Wait for a delay during WPAN1` 2500 `ms` (17): giving the possibility to extend the default SLATE connection duration with the SMH300 device, which is by default 2500 ms, allowing to take benefit of the wake up by HID key to update its content right now. `Folder synchronization over WPAN1` (18): allowing the SLATE to update its content through WPAN1 (mandatory when working with SMH300 device).*

- `Send NFC tag on WPAN1` (19): allows to transmit the NFC tag to the SMH300 device after NFC badging on the SLATE.

> ⚠ *In this case, the following actions must be activated after NFC tag: `Wait for a delay during WPAN1` 2500 `ms` (17): giving the possibility to extend the default SLATE connection duration with the SMH300 device, which is by default 2500 ms, allowing to take benefit of the wake up by NFC to update its content right now. `Folder synchronization over WPAN1` (18): allowing the SLATE to update its content through WPAN1 (mandatory when working with SMH300 device).*
>
> ☛ `Receive Message overlay over WPAN1` is inactivated by default because it is not supported in this version.



d) Mobile device configuration:

These are the main available actions linked to mobile devices that the SLATE can do on the wake up events explained above:

- `Send HID key on WPAN2` : allows to transmit the keycode of the key pressed on the SLATE to the mobile phone,
- `Wait for a delay during WPAN2` 2500 `ms` : gives the possibility to extend the default SLATE connection duration with the mobile device, which is by default 2500 ms. It could be needed in case using with some specific Androïd OS or iOS versions. Changing this value must be first allowed by Qeedji support.
- `Receive Message overlay over WPAN2` : allow to activate the communication with Mobile application.

e) Temporarily secondary content display on key press:

The `Display a key image instead of standard one, during <n> seconds` (10) action needs to be activated for the after `Key` event. It allows to activate the temporarily secondary content display feature and configure the duration from 1 to 65535 seconds (18 hours).

The required .ppk content are not provided in the product. The customer has to generate them itself with the provided `img2ppk.exe` tool. Download the `img2ppk.exe` tool from the Web site https://www.qeedji.tech.

Create your .BMP content (or .PNG content in the 800x600 resolution) with any content editor your have and save them into .BMP or .PNG format.

Execute the `img2ppk.exe` tool on your MS-Windows computer. Select the source content (.BMP or .PNG) and enter the names for the destination file .PPK:

- `F1.ppk` ,
- `F2.ppk` ,
- `F3.ppk` ,
- `F4.ppk` ,...

For further information, refer to the `img2ppk` application note.

Connect the SLATE106 to your computer with an USB link and copy the .ppk contentinto the SLATE file system, one appropriate content name for each key pressed.

f) Interactivity configuration for custom application:

The `Start a timer for` `<m>` `s repeated` `<n>` `times maximum` (11) action needs to be activated for the `key` event. It allows to maintain interactivity with one user for custom applications by waking up here 3 times within 30 seconds in the default configuration:

- `Start a timer for` `<m>` `s repeated` `<n>` `times maximum` : not activated in the default configuration:
- `<m>` : 30..60
- `<n>` : 1..9

For further information, contact support@qeedji.tech.

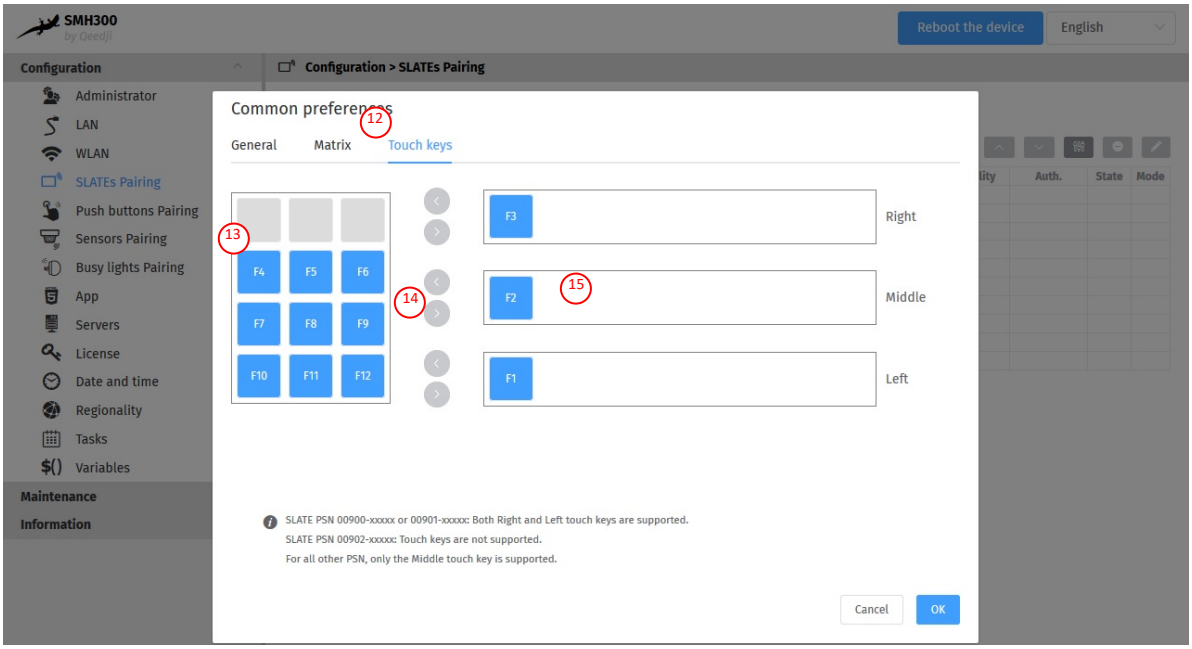
For more information, refer to the `SLATE106 User manual` on the Qeedji Web site.

Touch Keys:

Select the `Touch keys` (12) tab.

The `Touch keys` tab allows to configure the key mapping for:

- the Middle key button:
  - In the default keymap configuration: `F2` for `Middle key` ,pressing once on the Middle key of the SLATE allows to send *F2* keycode to the SMH300 (expected value for *Book now* for resource reservation App):
    - Using some App for resource reservation may require to have the default configuration for keymap.
- the temporarily secondary content display on key press feature:
  - In the default keymap configuration: `F2` for `Middle key` , pressing once on the Middle key displays the *F2.ppk* content for a specific duration,



To support another configuration for temporarily secondary content display on key press, for example `F4.ppk` after a second Midle key press, select the *F4* (13) keycode on the left table, and press on the right arrow (14) for the Middle input. It should be added automatically in the Middle input (15).

To finalize the temporarily secondary content display on key press feature, generate the appropriate *F2.ppk* and *F4.ppk* with the `img2ppk.exe` tool and put them in the SLATE file system. For further information, read the SLATE106 user manual.

Like explained above, the temporarily secondary content display on key press feature may need to activate:

- support for Wake-up by vibration sensor,
- support for Touch keys.

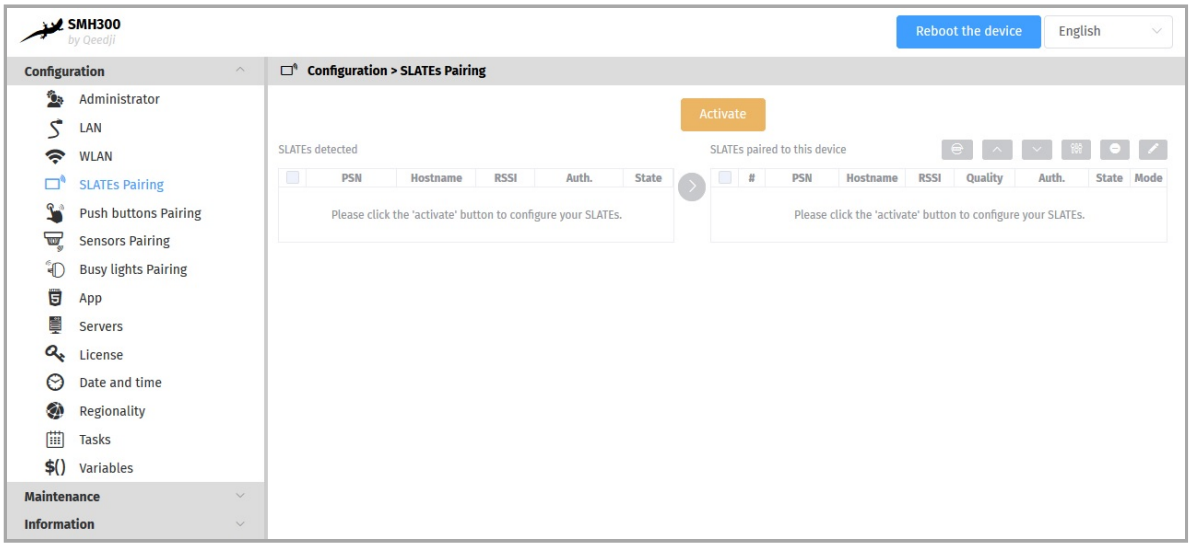
Pairing procedure

The SMH300 device pairing allows to associate one or several SLATEs to a SMH300 device. A SLATE can be paired to only one smh300 device.

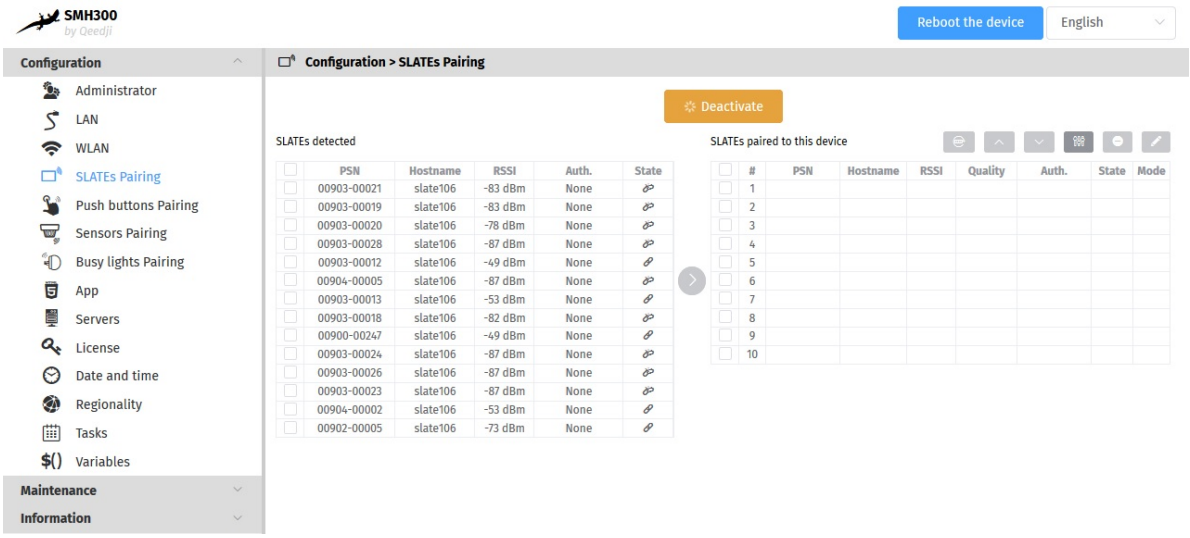
> ⚠ When a new SMH300 device is trying to pair a legacy SLATE already paired to another SMH300 device, the SLATE will be paired to the new SMH300 device and unpaired automatically from the previous one. To prevent from any unexpected SLATE pairing by another user, a pairing `PIN code` can be used to prevent from mistaking.
>
> ⚠ The SMH300 device can detect the SLATEs only when they are not in `Sleep` mode. In the default factory configuration, the SLATEs are programmed to wake-up and communicate for a while on the WPAN network every 15 minutes then fall again into `Sleep` mode.

a) Listing the available SLATEs on the WPAN network

Connect to the smh300 device WebUI, and in the `Maintenance > SLATEs Pairing` menu, press on the `Activate` button.



> ⚠ Remember that when the `Deactivate` label is written on the button, the nearby SLATEs **can NOT update their content NOR upgrade their firmware**. You will need to press on the `Deactivate` button at the end of the pairing procedure so that the SLATEs can update their content. When there is no user action change SMH300 device configuration during 5 minutes, the pairing is aborted automatically. To launch again the pairing procedure, press again on the `Activate` button.



Wait for 15 minutes until all your SLATEs are detected by the smh300 device. They should appear with their PSN in the `SLATEs not paired to this device` left table.

> ⚠ If the SLATE does not appear in the list after 15 minutes, check their wake-up policy configuration. For further information, refer to the SLATE106 User manual.

In the `SLATEs not paired to this device` left table, these parameters values are shown:

- a check column: allows to select one or several SLATEs. Selecting a SLATE allow to drop it in the right table.
- `PSN` : SLATE Product Serial Number,
- `Hostname` : name of the SLATE in the WPAN network,
- `RSSI` : received Signal Strength Indication (in dBm),
- `Auth.` :
  - `PIN code` : a pairing `PIN code` is required,
  - `None` : no pairing `PIN code` is required.
- `State` :
  - `Unpaired` : the SLATE having this PSN is not paired to the SMH300 device,
  - `Paired` : the SLATE having this PSN is paired to this SMH300 device,
  - `Paired to another device` : the SLATE having this PSN is paired to another SMH300 device.

b) Pair all the required SLATEs

To pair the required SLATEs to this smh300, you have to select them, identified by their PSN in the `SLATEs not paired to this device` left table, and drop them into the `SLATEs paired to this device` right table.

In the `SLATEs paired to this device` right table, these values can be shown for each SLATE:

- a check column: allows to select one or several SLATEs. Select a SLATE allow to access to further menus for these SLATEs.
- `#` : `Index` from 1 to 10,
- `PSN` : SLATE Product Serial Number,
- `Hostname` : name of the SLATE in the WPAN network,
- `RSSI` : received Signal Strength Indication (in dbm),
- `Quality` :
  - `Quality of connection` :
    - `Green` : the connection quality is very good and warranty the content update or the APPLI.CFG configuration file update in the 15 minutes interval,
    - `Orange` : the connection quality is not perfect. The download error rate has reached a threshold that can affect the file download success rate meaning that in some case, even if it should be, the APPLI.CFG file or the .ppk content may not be updated for sure within the 15 minutes interval,
    - `Red` : the connection quality is bad. The download error rate has reached a threshold that affect seriously the file download success rate meaning that, even if it should be, the APPLI.CFG configuration or the .ppk content will be not updated in a 15 minutes interval. The SLATE can not be used in this condition. It is required to install the SLATE106 at another location,
    - `Grey` : not yet determined (value shown in the tooltip),
  - `Last wake-up on` [1]: *mm/dd/yyyy, hh.mm.ss AM/PM* (value shown in the tooltip), last connection date & time of the SLATE to the SMH300.
  - `Last synchronization on` : *mm/dd/yyyy, hh.mm.ss AM/PM* (value shown in the tooltip), date of the last successful file downloading.
- `Auth.` :
  - `PIN code` : a pairing `PIN code` is required,
  - `None` : no pairing `PIN code` is required.
- `State` :
  - `Unpaired` : the SLATE having this PSN is not paired,
  - `Pairing in progress` : the SMH300 is waiting the next SLATE wake up so that it takes the new APPLI.CFG configuration file.
  - `Paired` : the SLATE having this PSN is paired to this SMH300 device.
- `Mode` :
  - `Test Card` : the `Test Card` is displayed,
  - `Play` : the SLATE is configured to updated its `HUB.PPK` content.

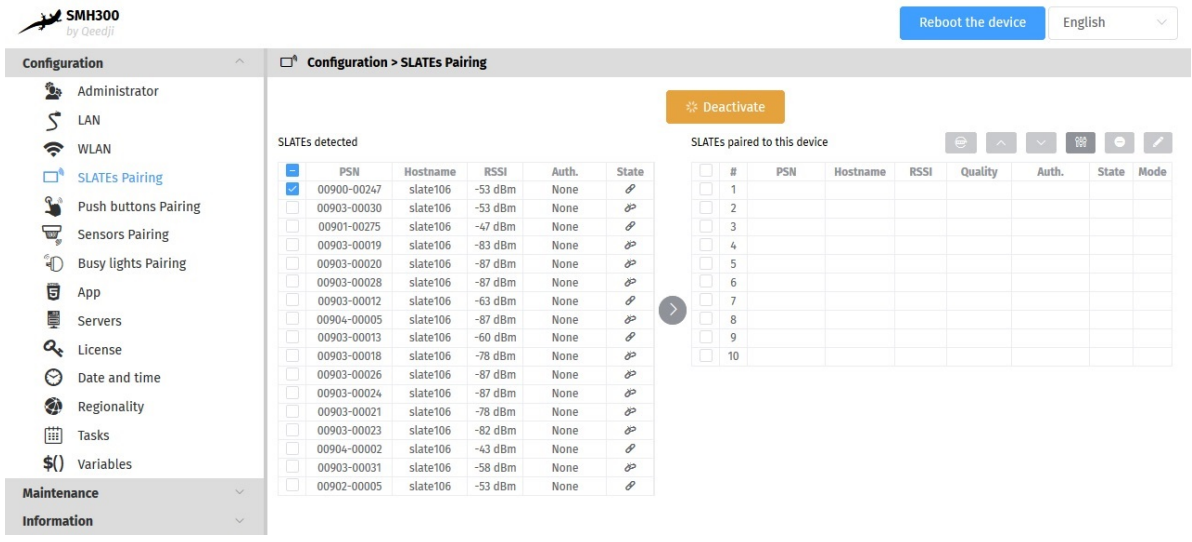
[1] The `Last wake-up on` date value must be roughly the same for all the paired SLATE (modulo the heartbeat). In case the `Last wake-up on` date value seems to be not correct, check the SLATE battery status in `WPAN Devices` menu of the `Information` pane.

In the `SLATEs paired to this device` right table, move up or move down the SLATEs so that they match the `Index` you have defined in the paragraph above `SLATE pairing specification` . By default, after a new SLATE drop, the SLATE configuration is:

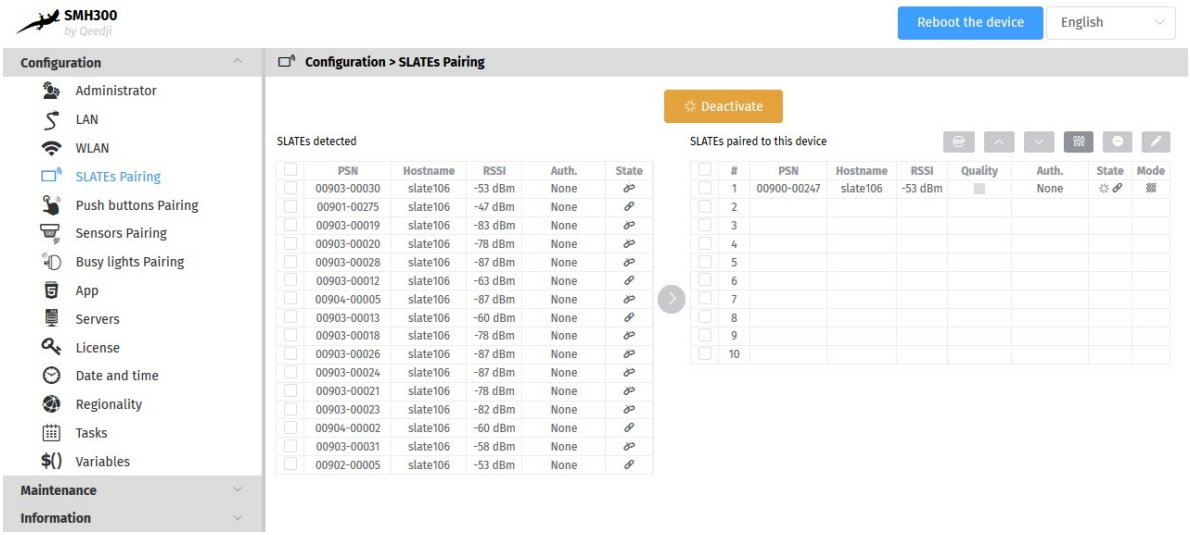
- `Test card` activated.
- no pairing `PIN code` is required.

If you try to pair a SLATE already used in a previous installation, and which was already been paired with a pairing `PIN code` , at the device dropping, you are invited to enter the appropriate pairing `PIN Code` (4 alphanumeric digits).

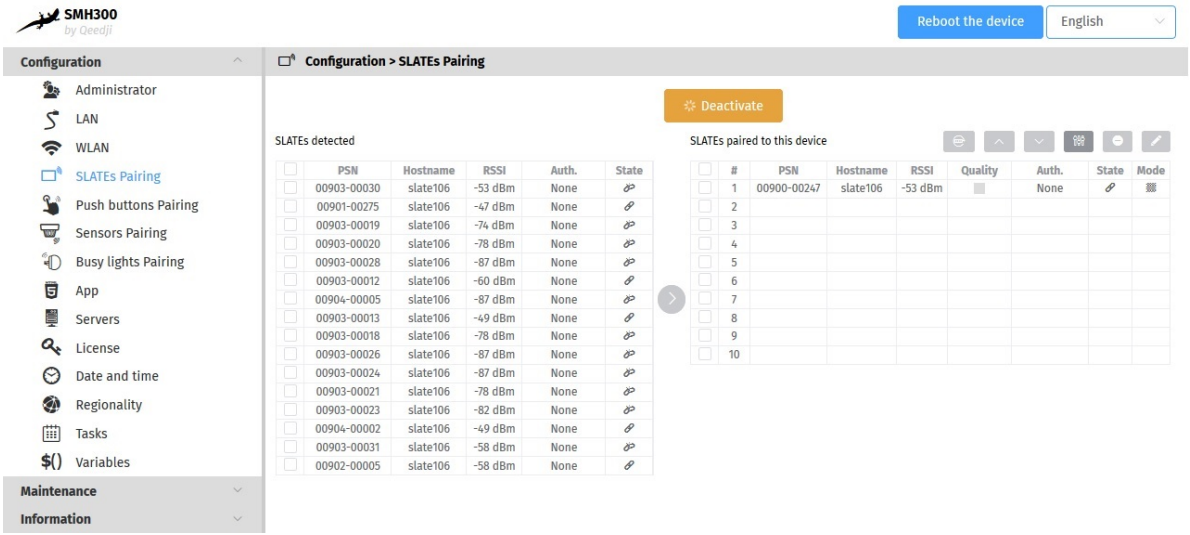
Select one or several SLATEs device in the `SLATEs not paired to this device` left table.



Then drop them into the `SLATEs paired to this device` right table using the right arrow button ❯ between the two tables.



Wait for the next SLATE wake up to see the paired status going from `Pairing in progress` state to the `Paired` state.



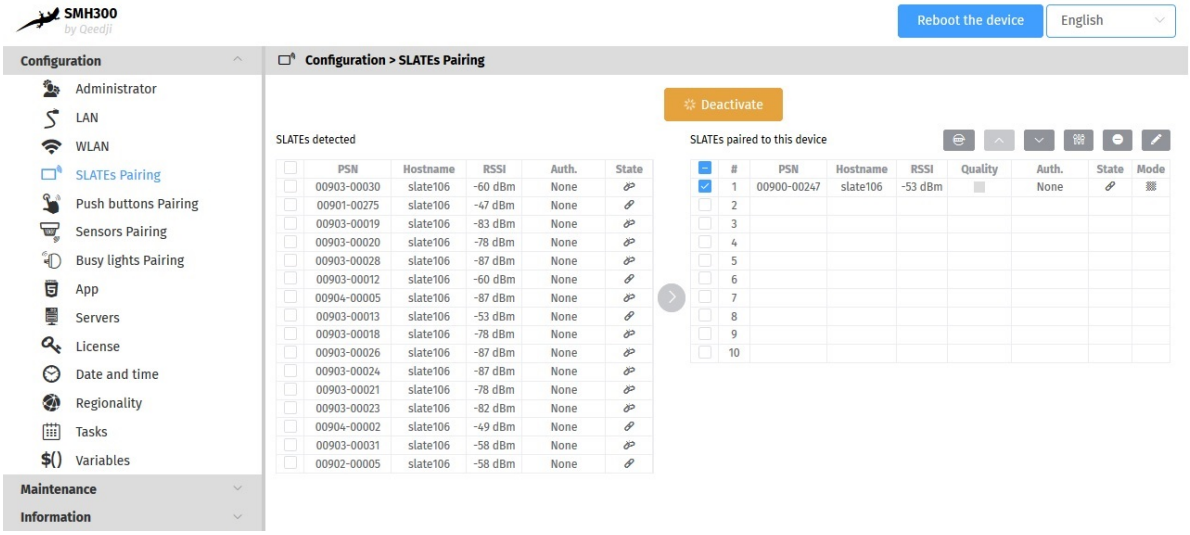
> ☛ *To avoid waiting for 15 minutes, you can also speed-up the pairing process by plugging for 3 seconds one USB power bank on each SLATE106 device to pair. However it is reserved for advanced user for first installation.*

When all your SLATEs are in `Paired` State and the `Mode` is `Test card`, they should display their own `Test card` as soon as there are waking up.

> ☛ *If the SLATE is not in `Paired` state after 15 minutes, refer to the chapter §Common preferences.*

c) Select a paired SLATE to accesss the menu

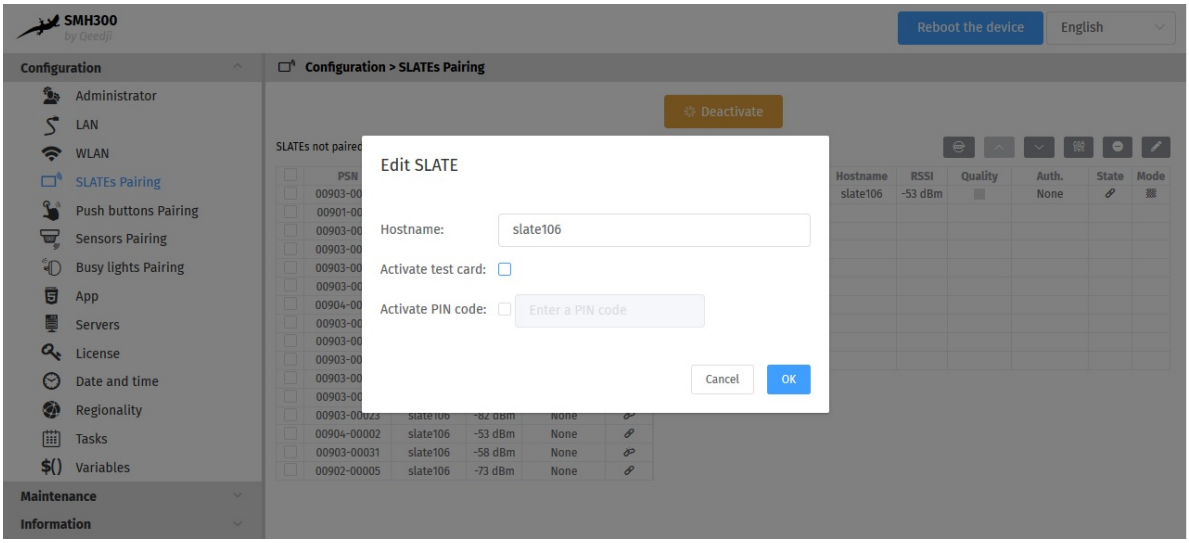
To activate the edition button, select a SLATE in the `SLATEs paired to this device` right table.



Then, these are the available buttons associated to the selected SLATE:

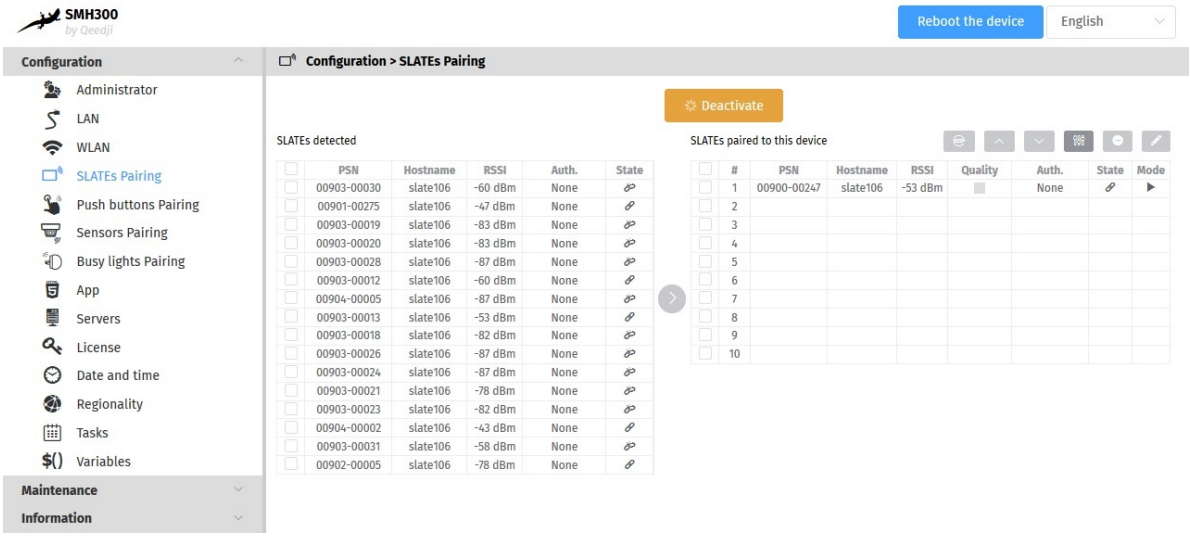
- `Reset the PIN code for the mobile applications` : allows to reset the SLATE private PIN code for the mobile applications when using `Slate Message Overlay` or `Slate Maintainer`,

- `Move up SLATEs indices` : allows to change the SLATE `Index` by decreasing it,
- `Move down SLATEs indices` : allows to change the SLATE `Index` by increasing it,
- `Unpairing` : allow to unpair a SLATE from this SMH300 device,
- `Edit SLATEs` :
  - `Hostname` :
    - name of the SLATE in the WPAN network
      - free text (8 characters), default value: *slate106*,
  - `Activate test card` option:
    - *checked* (default value):
      - the SLATE is configured to display the `Test card` ,
    - *unchecked*
      - the SLATE is configured to display the .ppk content, whose sources are located in the respective WebDAV directories of the SMH300 device.
  - `Activate PIN code` option:
    - *checked*: a pairing PIN code is required:
      - values: 0000 .. 9999,
    - *unchecked* (default value): no pairing PIN code is required.



When the `Test card` is successfully displayed in the interface for all your SLATEs, in the `SLATEs paired to this device` right table. double click on each device:

- inactivate the `Test card` ,
- if required, change the `Hostname` and set a pairing `PIN code` according to your needs.

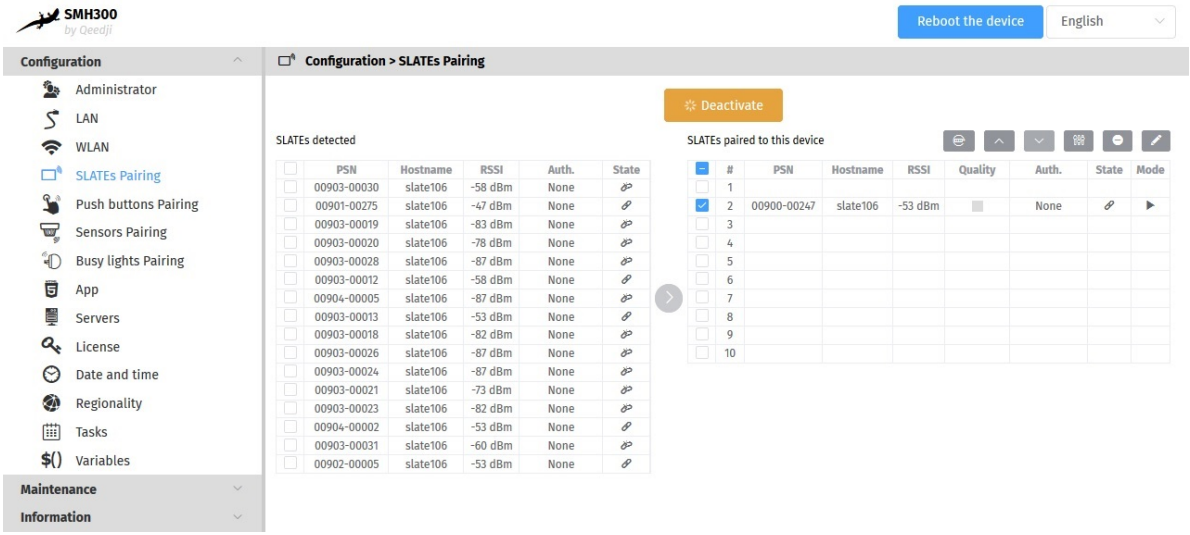


To ensure that the SLATE keeps paired with your SMH300 device, an is not unexpectedly unpair by another user, you can use a 4 digits PIN code.

> ☛ Each time the pairing `PIN code` , `Hostname` or `Test card` parameters are modified, the SLATE is unpaired temporarily until the configuration is taken by the SLATE. So do change them with the right parameters values all at once.
>
> ⚠ The pairing `PIN code` can be modified successfully only when first a pairing has been completed.

Move the SLATE to the appropriate index.

> ⚠ If you are using a booking reservation App, the index must be aligned with the booking resource index configured in the booking reservation App form.



Then wait for the next SLATE wake up to see the paired status going from `Pairing in progress` state to the `Paired` state.

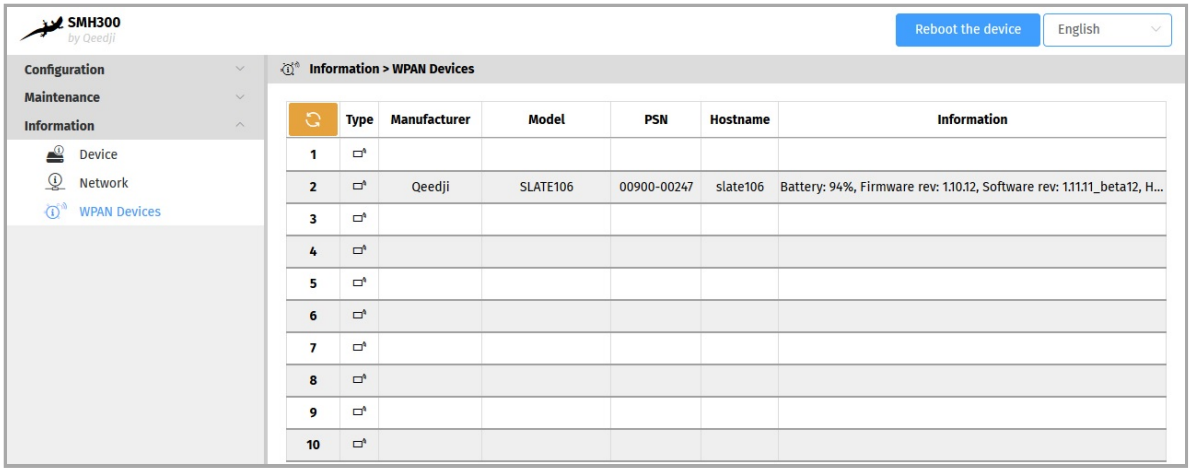
When all your devices are in `Paired` state , and are in ▶ `Play` mode, that means they all the SLATE devices are ready now to get a new `HUB.PPK` content.

> ⚠ In case smh300 migration from 3.12.XX to 4.13.14, you should not be able to finalize right now the configuration of some SLATE106, whose the firmware version is V1.10.XX. These device must first take the new firmware version 1.11.11 before taking account the new APPLI.CFG configuration file. Just ensure that the programmed `Play` (or `Test card`) mode is the right one then press now on `Deactivate` button. Wait for a while that the SLATE106 devices are installing the new software release V1.11.11 and are then able to take the configuration given by the smh300 `SMH300` hub.

d) Finalize the pairing procedure with `Deactivate` button:

To complete the smh300 device configuration, and to allow the SLATE to update their content, press on the `Deactivate` button.

Then check the pairing index and the hostname in the `WPAN Devices` menu of the `Information` pane.



If a content `HUB.PPK` is available in the appropriate WebDAV directories `http://<SMH300_IP_Addr>/.output/#/` , the .ppk content will be donwloaded through WPAN1 by the respective SLATEs.

> ☛ *In case the appropriate WebDAV directory is empty or does not contain the right filename, the SLATE can not update their .ppk content.*
>
> ☛ *When the SMH300 is in standby, the .ppk content are not updated anymore on the WebDAV directories.*

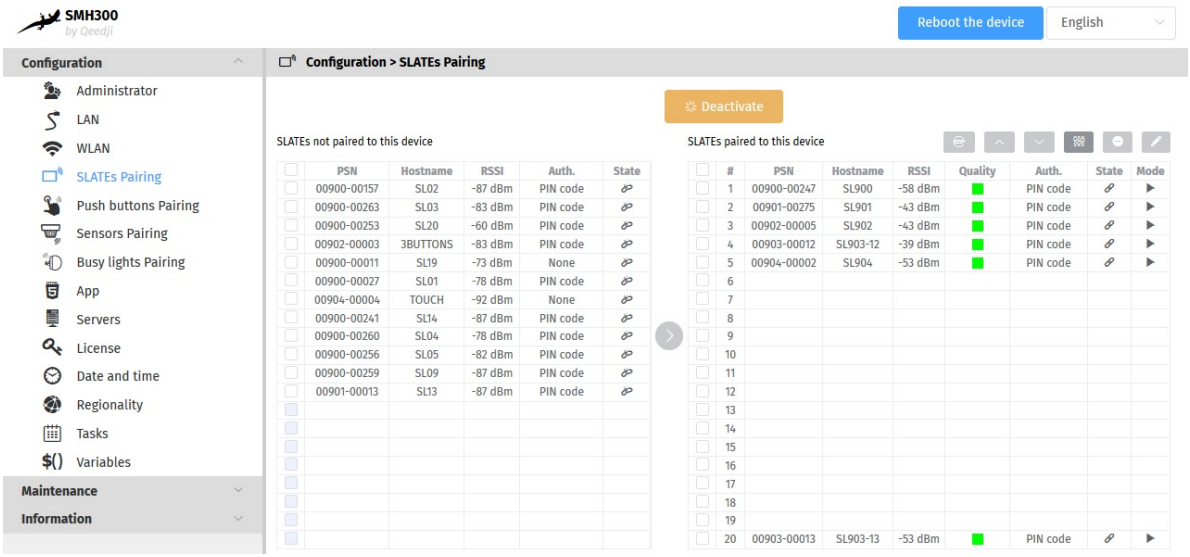
Time to obtain a connection quality

The connection quality status is showing the file download error rate averaged on the ten last files downloading between the SMH300 and the SLATE. The files can be as well:

- an APPLI.CFG configuration file,
- a .ppk content,
- a .rpk software release.

After a SMH300 reboot:

- the connection quality displayed is grey meaning that no connection quality is available,
- one hour is required to obtain a first `Red` connection quality,
- between one hour and two hours is required to obtain an `Orange` connection quality,
- two hours and half are required to obtain an `Green` connection quality.



Four hours after the SLATE has entered in sleep mode, the quality connection computed by the SMH300 for this device returns to grey color.

> ☛ *When the `connection quality` is orange or red, the batteries lifetime may decrease because of the download retries.*

In case you are facing a red `connection quality` :

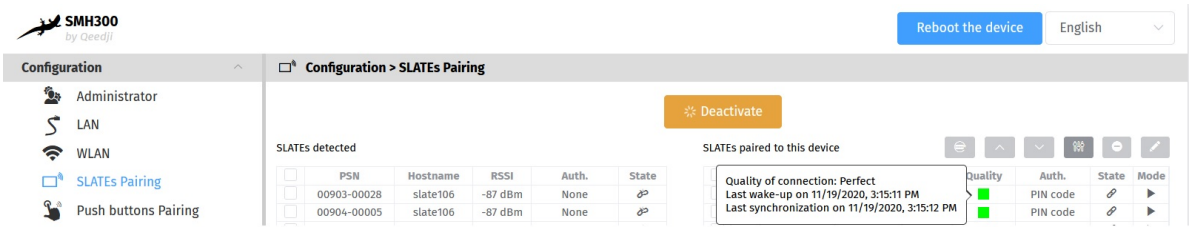
- check that the available free space on the filesystem is at least 220 KB to warranty a software release or a .ppk content,
- check that some radio frequency obstacles do not prevent the SMH300 device to work properly with the SLATE devices,
- check also that the SLATE is properly installed in the appropriate distance and not hidden behind a thick wall.

> ☛ *The quality connection status does not bring information on the battery level.*

If the problem persists despite of the advices above, please contact support@qeedji.tech.

Battery information

The `Last wake-up on` status of the `Quality` tooltip gives information on the last connexion date for a given SLATE.



If the `Last wake-up on` date for a SLATE is very different from the same status for other SLATE, it is possible that the SLATE battery level became not sufficient. Check the battery level of the SLATEs in the `WPAN Devices` menu of the `Information` pane. For further information, refer to the chapter §Information > Wpan devices.

Unpair a SLATE

To unpair a SLATE device, select a device in the `SLATEs paired to this device` right table, and press on ⛔ `Unpairing` button.

SMH300 device replacement

In case you must replace a smh300 device which was paired to several SLATEs devices:

- old smh300:
  - write down the user preferences values for SLATE configuration,
    - user preferences listed in `User preferences for SLATE device` chapter.
  - write down the list of all the `PSN` / `Hostname` /pairing `PIN code` of the paired SLATE devices,
  - unpair all the SLATEs listed above.
- new smh300:
  - configure the smh300 device by keeping the same user preferences value for SLATE configuration,
  - pair all the slate devices, whose the list has been save with `PSN` / `Hostname` /pairing `PIN code` .
- if a pairing `PIN code` was used, you must enter the right pairing `PIN code` .

Get the PIN code and the hostname of a paired SLATE

To get the pairing `PIN code` and the `Hostname` of a paired SLATE device, connect to the smh300 device WebUI, and in menu `Maintenance > SLATE pairing` , press on the button `Activate` , double click on each device of the `SLATEs paired to this device` right table, and note the pairing `PIN code` and the `Hostname` .

PIN code forgotten

If you don’t remember the pairing `PIN code` for a device making that the device SLATE pairing can not complete, the only way is to connect the SLATE with an USB cable to a computer:

- either you can edit the preference values with `APPLI.HTA` GUI and get the pairing `PIN code` value in the field `Authentication method > PIN code`, eject properly the USB mass storage, then try again to pair the device the right pairing `PIN code` this time,
- or remove the configuration files `APPLI.CFG`, eject properly the USB mass storage, then try again to pair the device without `PIN code`.

Restore factory preferences

After a factory preferences restoring with the configuration Web interface, the SLATE PSN are kept in the `SLATEs paired to this device` right table, but

- their hostname are reset the `slate106` value,
- their `PINCODE` are reset to *no `PINCODE`*,
- their test card are displayed.

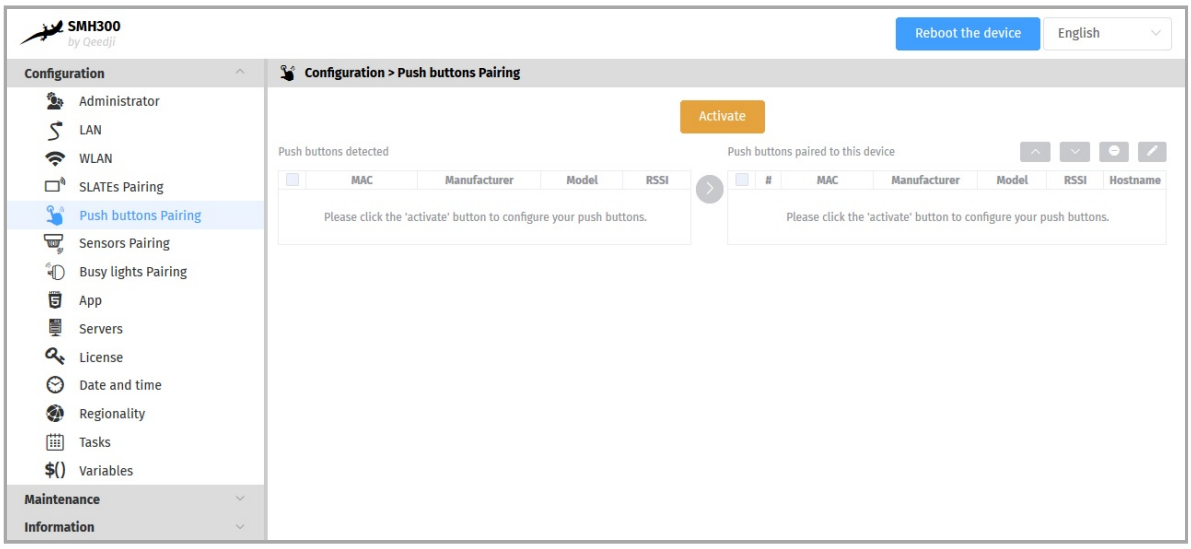
2.1.5 Configuration > Push buttons pairing

The `SMH300` device is designed to be able to work on the WPAN network with up to 10 EnOcean push buttons.

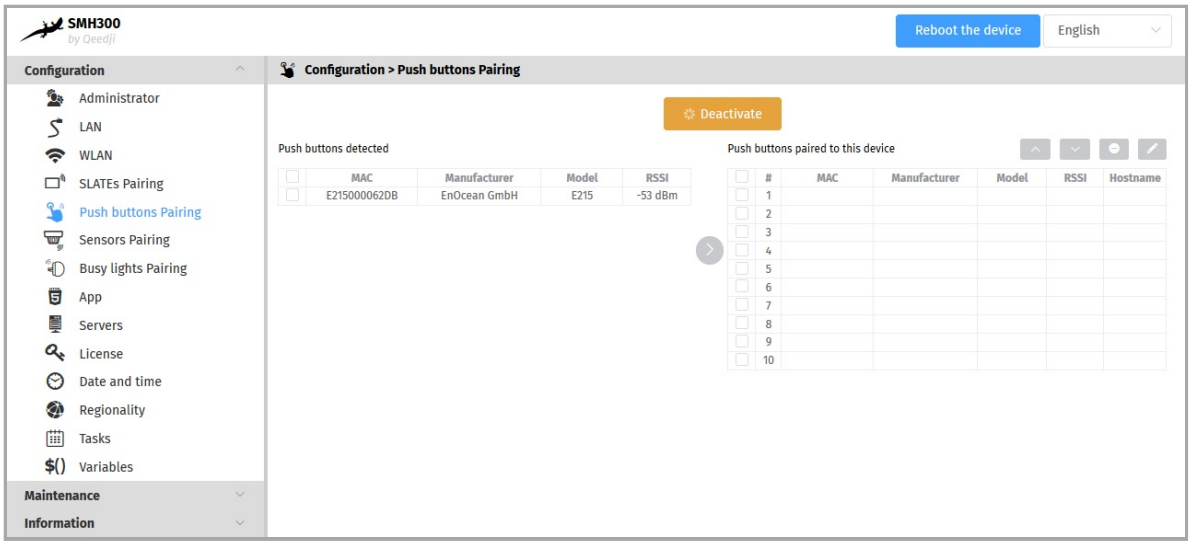
The model `EnOcean PTM 215B` device is a push button having 4 keys:

- `empty circle`,
- `full circle`,
- `+`,
- `-`.

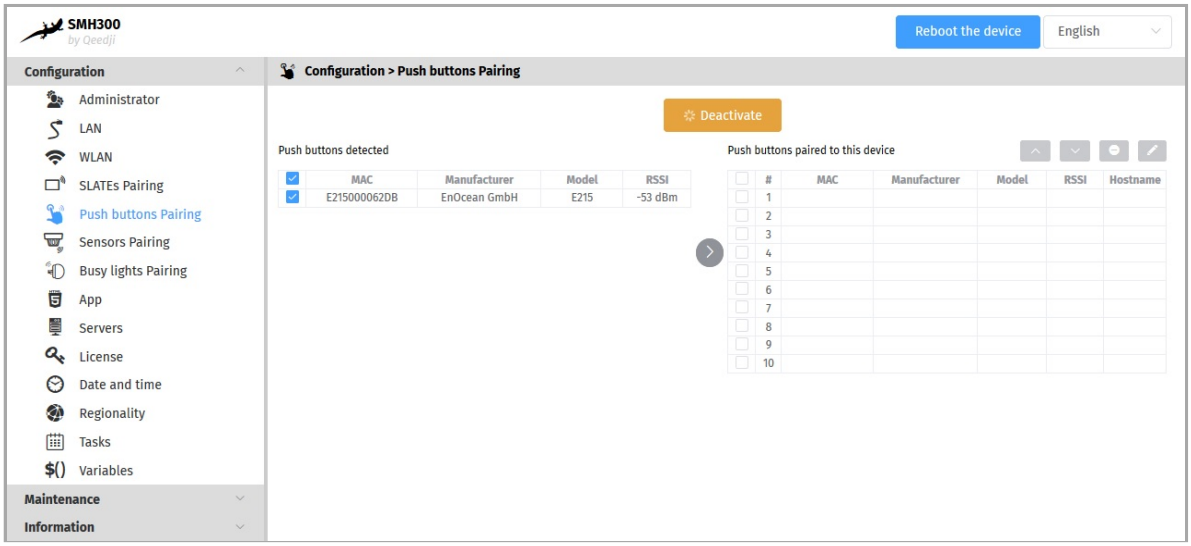
In the `Configuration` pane, select the menu **Push buttons pairing** to pair the EnOcean push buttons devices to your SMH300 device.



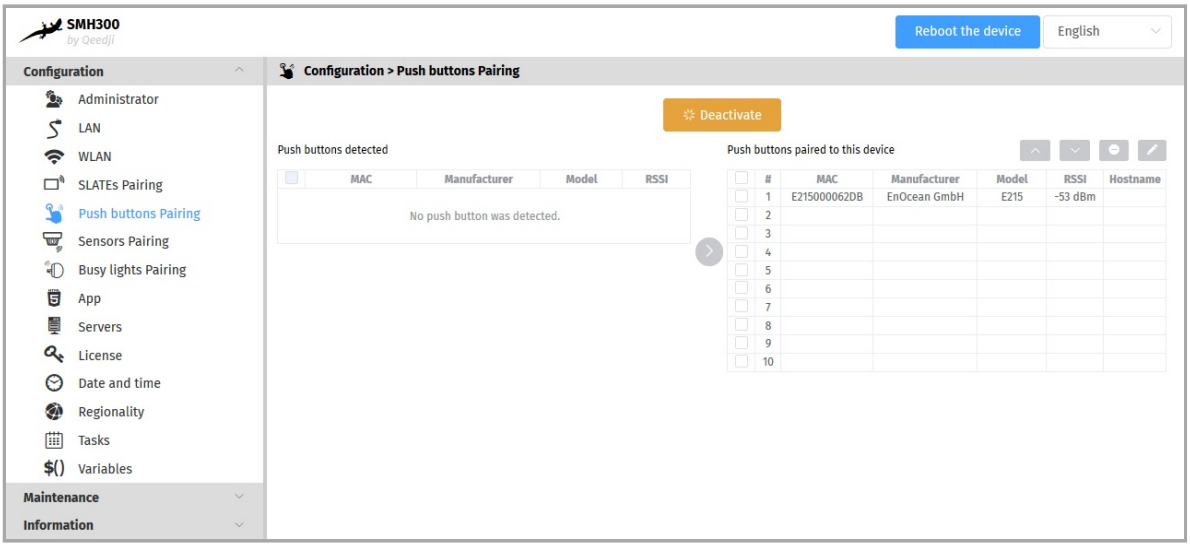
Click on `Activate` button to start the push button EnOcean device pairing process.



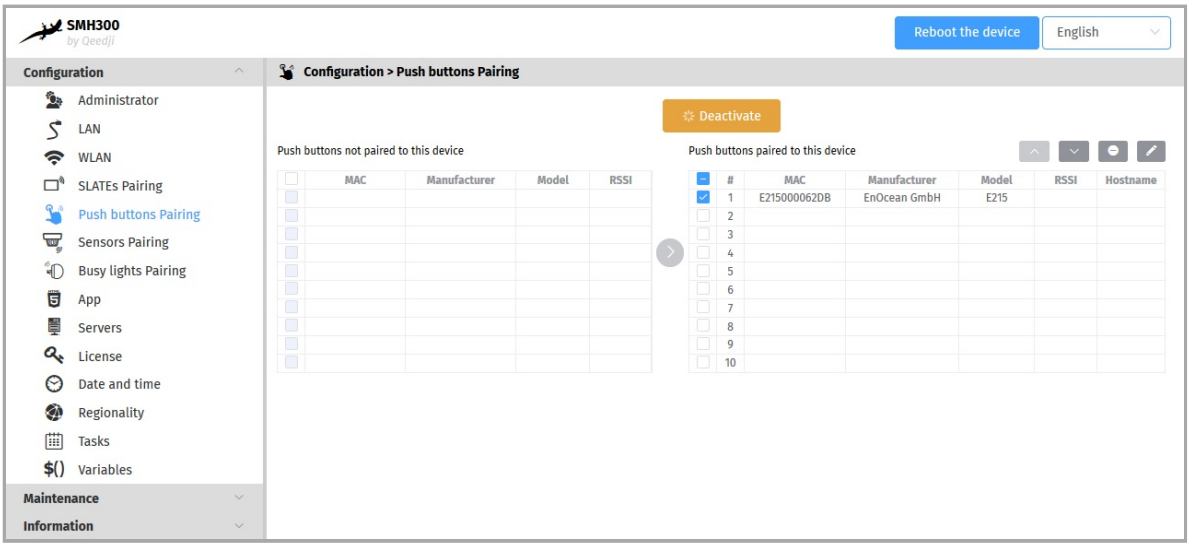
Press on the Ocean push button to trig a WPAN advertising. The push button should appear in the `Push button not paired to this device` list. Select one or several push buttons on the `Push button not paired to this device` list.



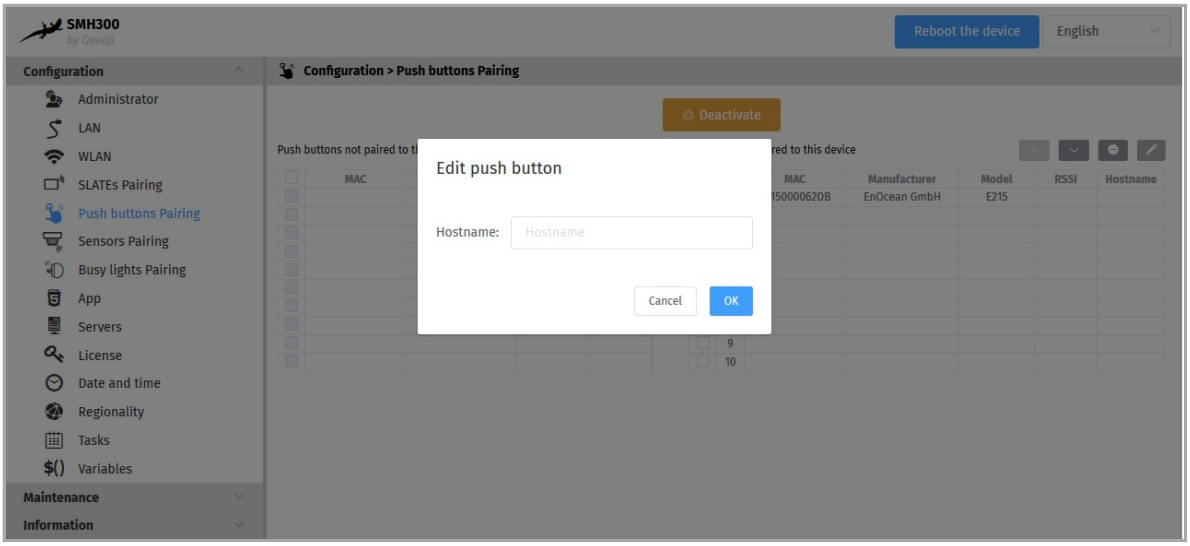
Click on the arrow to move the push button devices from the `Push button not paired to this device` list to the `Push button paired to this device` list.



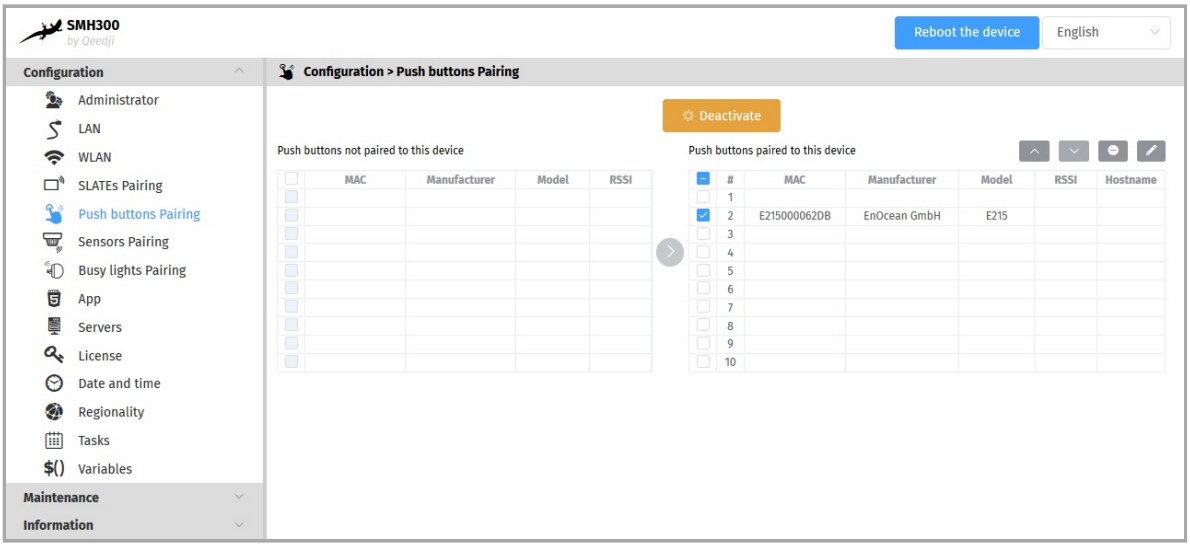
Select a paired push button device on the `Push button paired to this device` list.



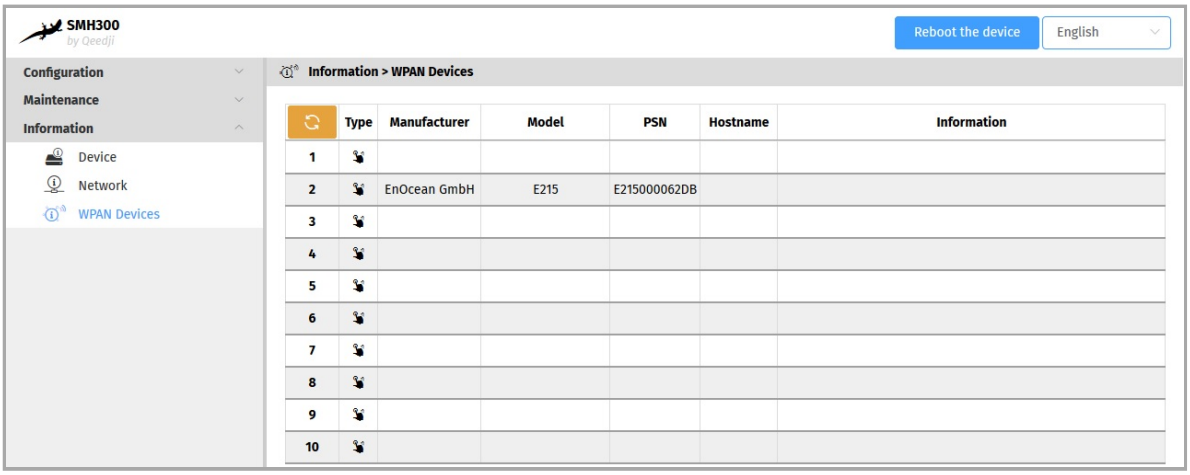
Click on the `Edit` button to change its WPAN hostname.



Click on the `Up` or `Down` arrow to change the push button index .



Click on `Deactivate` button to close the pairing process. Then check the pairing index and the hostname in the `WPAN Devices` menu of the `Information` pane.



If the index is correct, do consider here that your push-button is properly paired.

You cannot pair or use an EnOcean push button beyond a maximum distance from the SMH300 device specified by the manufacturer.

> ☛ *For further information about the available App, contact support@qeedji.tech.*

2.1.6 Configuration > Sensors pairing

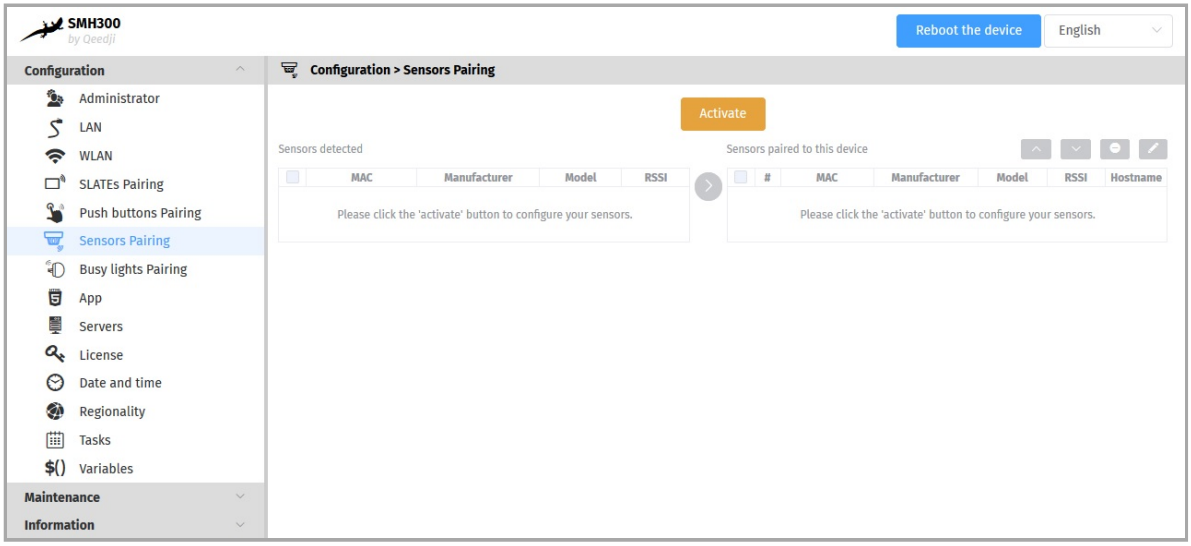
The `SMH300` device is designed to be able to work on the WPAN network with up to 10 EnOcean motion sensors.

The model E6211-K515 EnOcean device is a motion sensor sending periodically its status information:

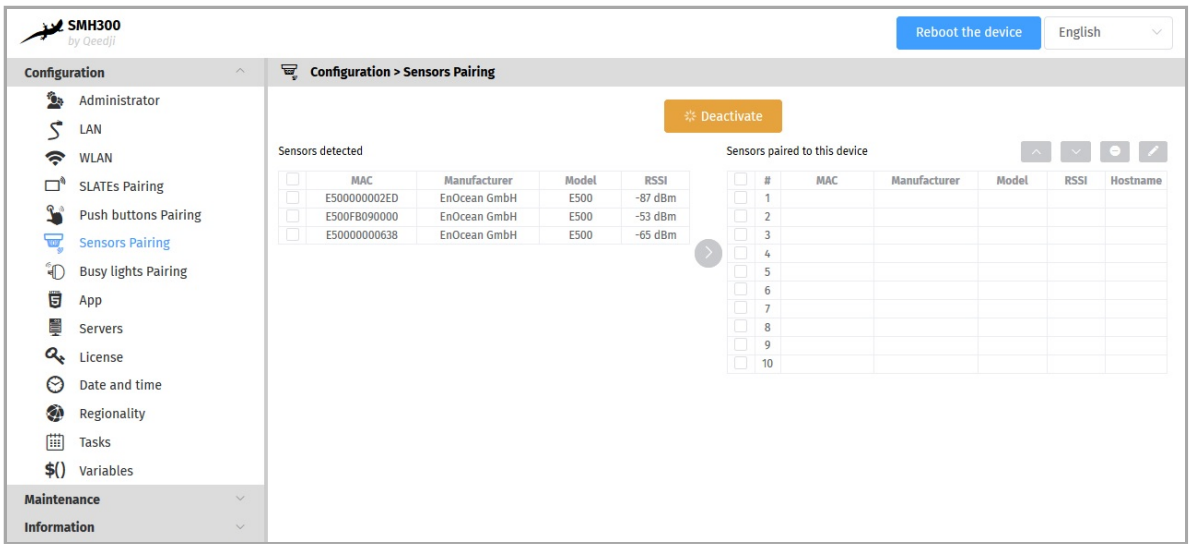
- `Battery` : 1 .. 100 %,
- `Solar cell light level` : value in lx unit,
- `Illumination from sensor` : value in lx unit,
- `Magnet contact` [1]:
  - occupied: at least one people,
  - Not occupied : no people anymore.

[1] *`Magnet contact` status is computed on the basis of the average number of people present in the room averaged within the 2 last minutes.*

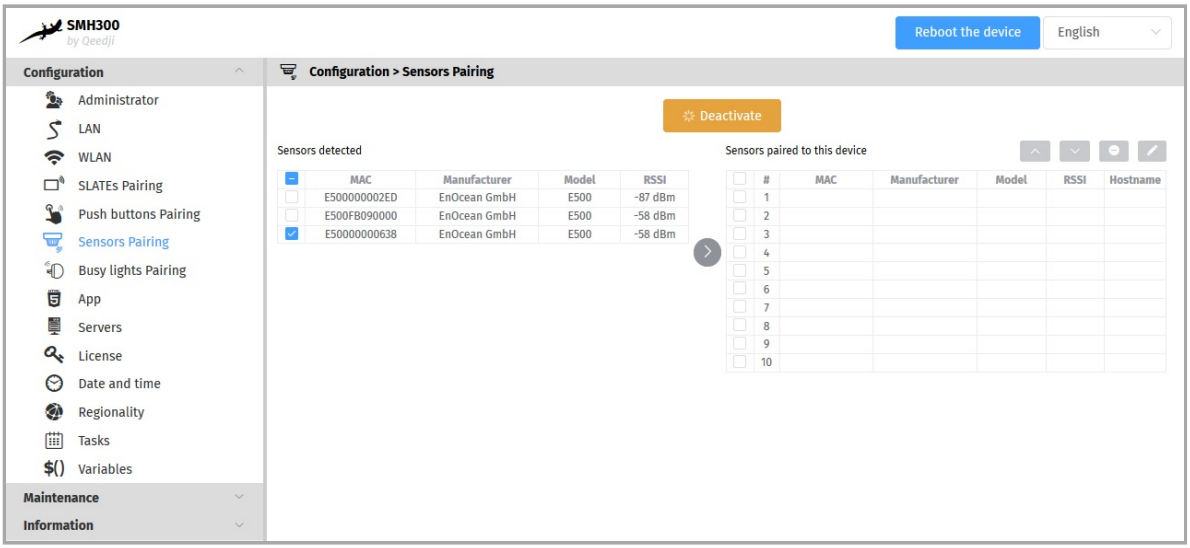
In the `Configuration` pane, select the menu **Sensors pairing** to pair the EnOcean motion sensors devices to your SMH300 device.



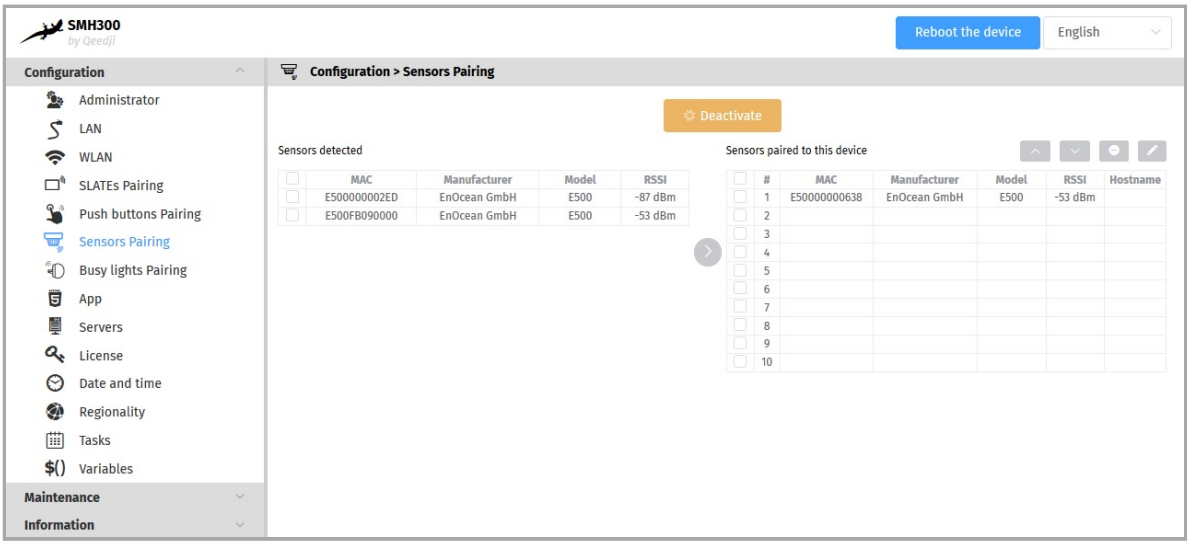
Click on `Activate` button to start the motion sensor device pairing process.



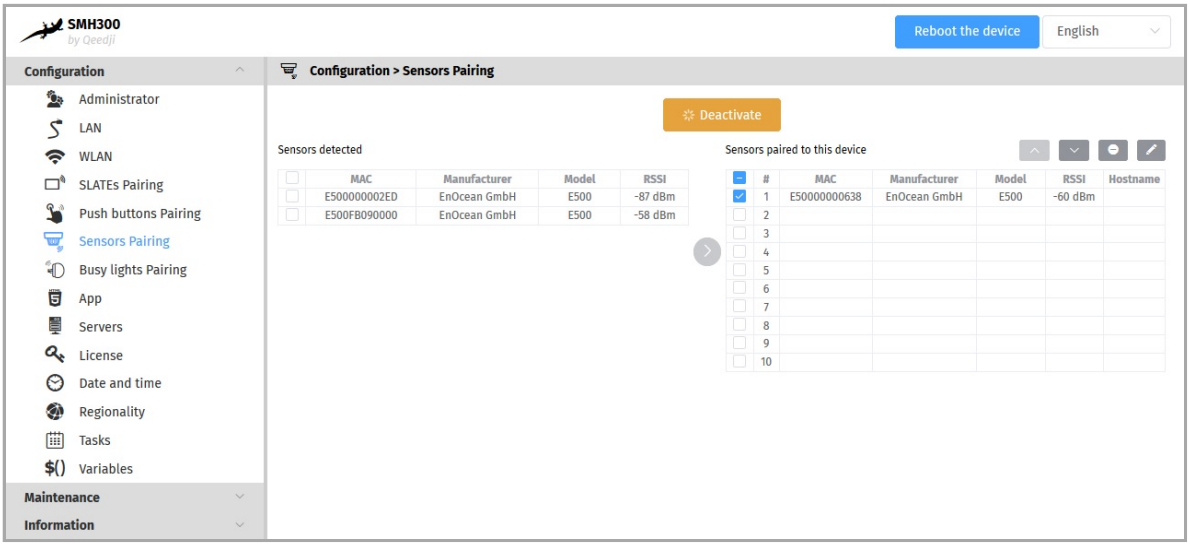
Select one or several push buttons on the `Sensors not paired to this device` list.



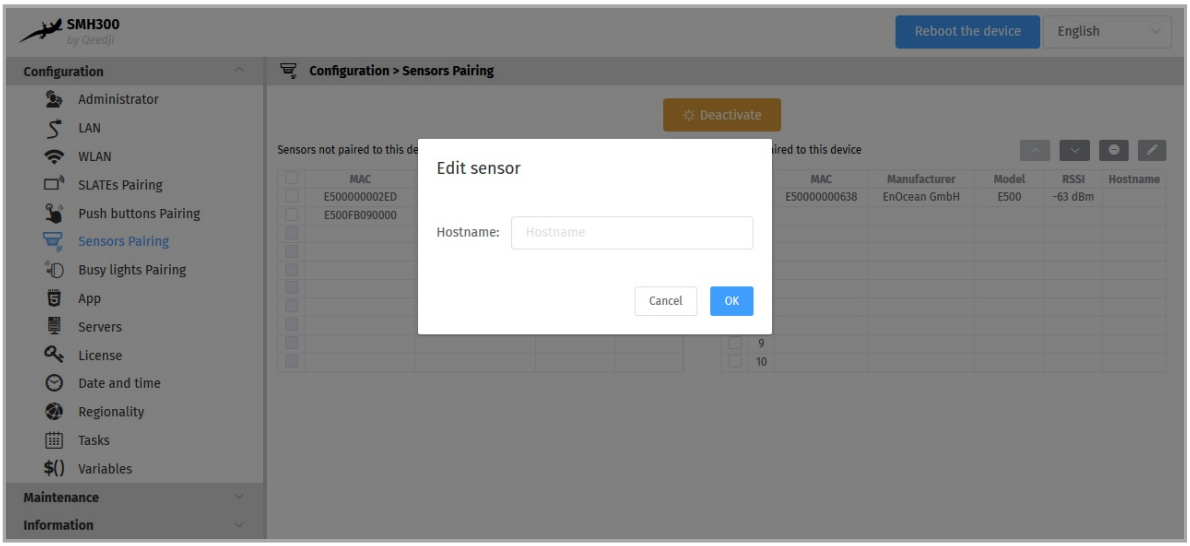
Click on the arrow to move the sensors devices from the `Sensors not paired to this device` list to the `Sensor paired to this device` list.



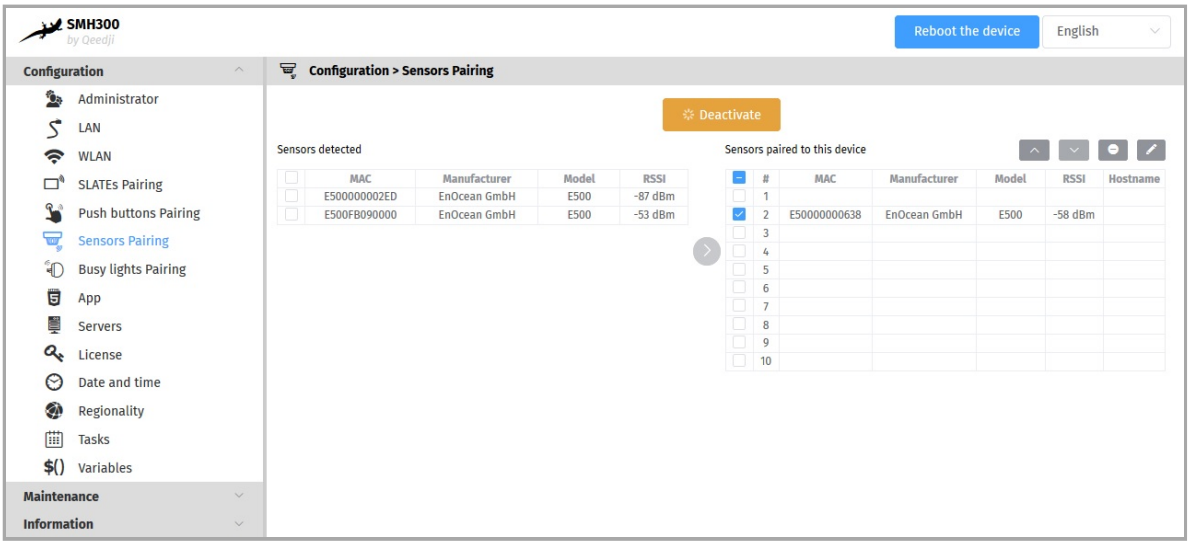
Select a paired sensor device on the `Sensors paired to this device` list.



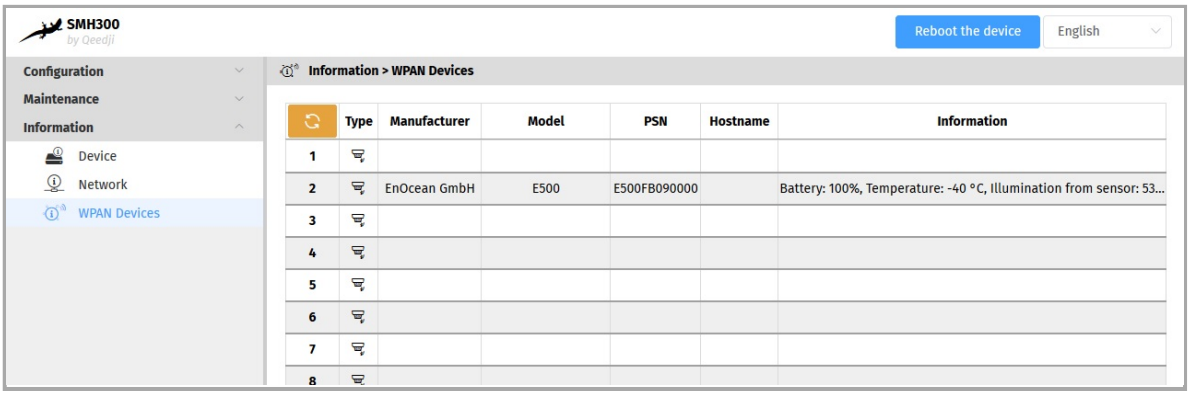
Click on the `Edit` button to change its WPAN hostname.



Click on the `Up` or `Down` arrow to change the sensor index.



Then check the pairing index and the hostname in the `WPAN Devices` menu of the `Information` pane.



Wait for a couple of minutes and press on the refresh button to refresh the sensor status.

If the index is correct, do consider here that your motion sensor is properly paired.

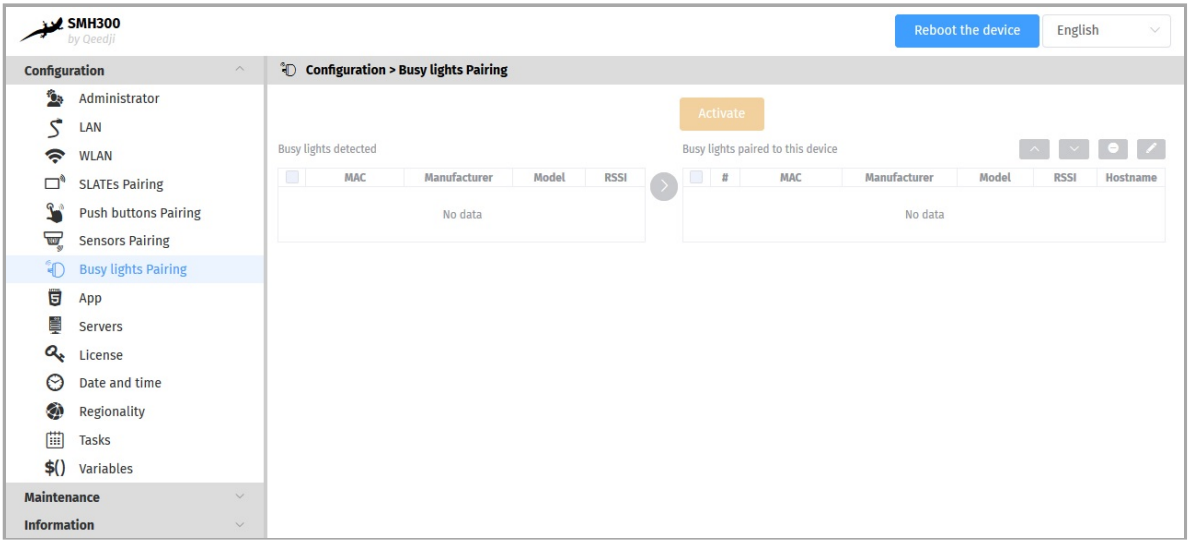
You cannot pair or use an EnOcean motion sensor beyond a maximum distance from the SMH300 device specified by the manufacturer.

> ☛ *For further information about the available App, contact support@qeedji.tech.*

2.1.7 Configuration > Busy lights pairing

In this version, it is not possible to pair and use busy light WPAN devices.

In the `Configuration` pane, select the menu **Busy lights pairing** to pair the `Qeedji` busy lights devices to your SMH300 device.



☛ *You can not pair and use the busy light sensor over the maximal distance far from the SMH300 device preconised by the manufacturer.*

2.1.8 Configuration > App

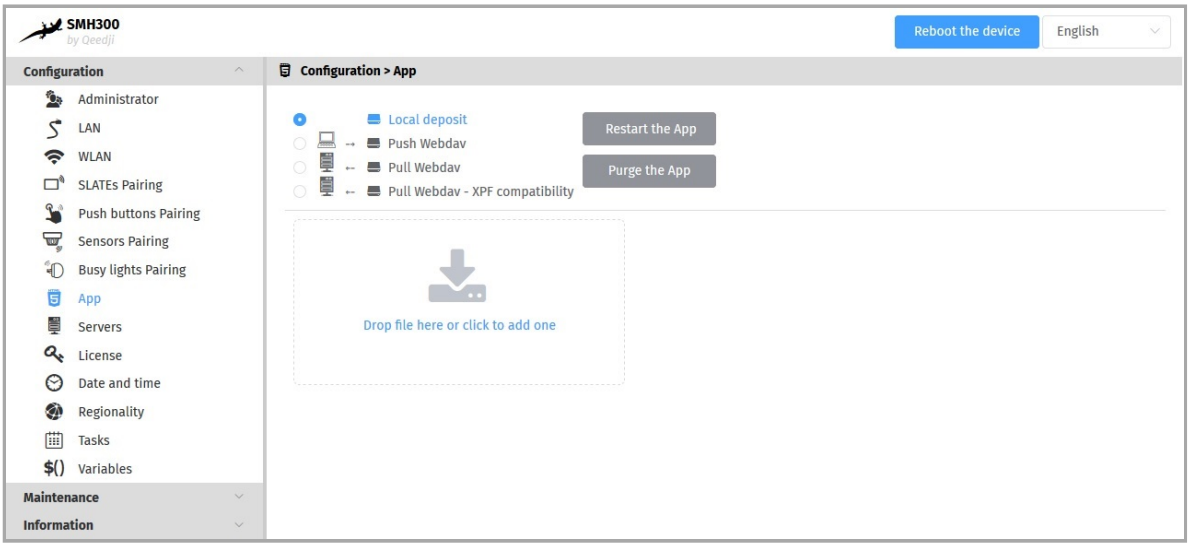
An `App` is a custom application that, once loaded on the device, allows you to play a broadcast channel or play content that one user has programmed.

From the `Configuration` pane, select the **App** menu to select how the App is loaded.

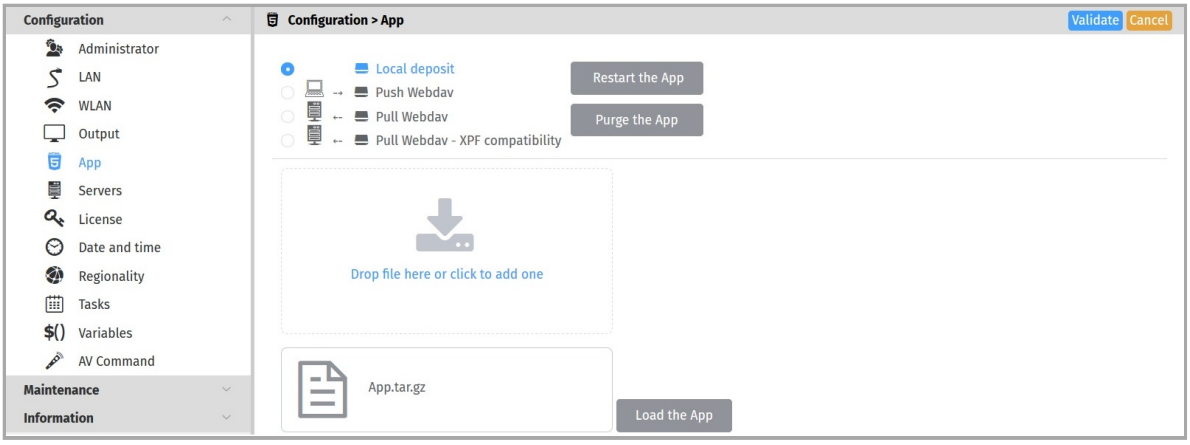
For each mode, you can use the `Purge the App` or `Restart the App` buttons at any time to remove the `App` from the device or restart it, respectively.

> ☛ *The `Restart App` or `Purge the App` cannot work when `Testcard` is activated.*
>
> ☛ *In order to restart an `App`, the `App` must be present on the device.*

- `Local deposit` : Allows you to load an App from the device's Web interface and play its contents immediately.



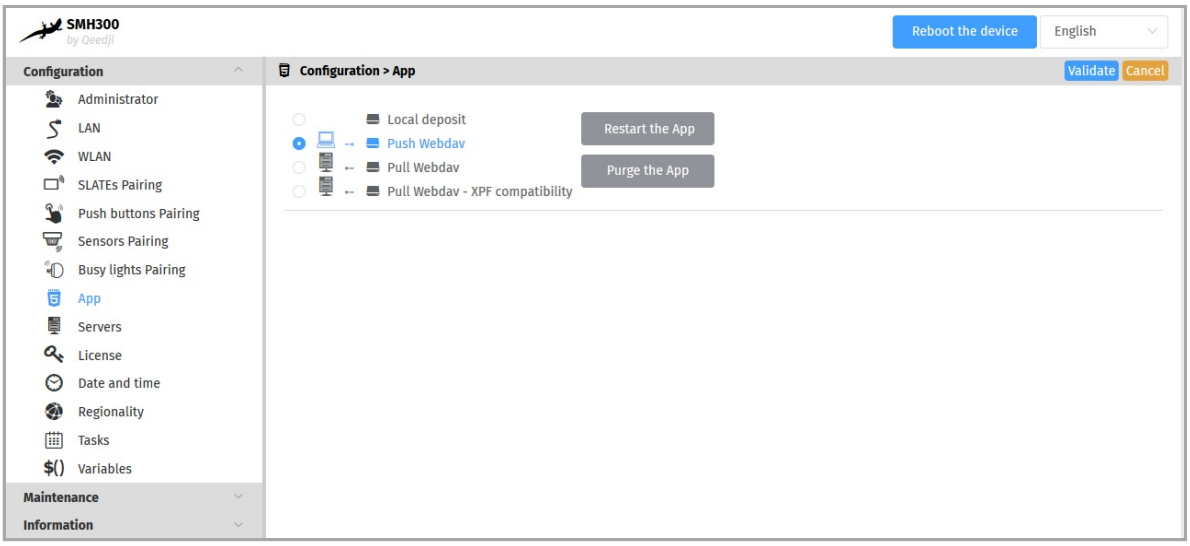
Use the `Drop file here` box or click to add one to drop your `App`.



Then click on the `Load App` button. When the file disappears from the interface, the App is loaded and launches automatically.

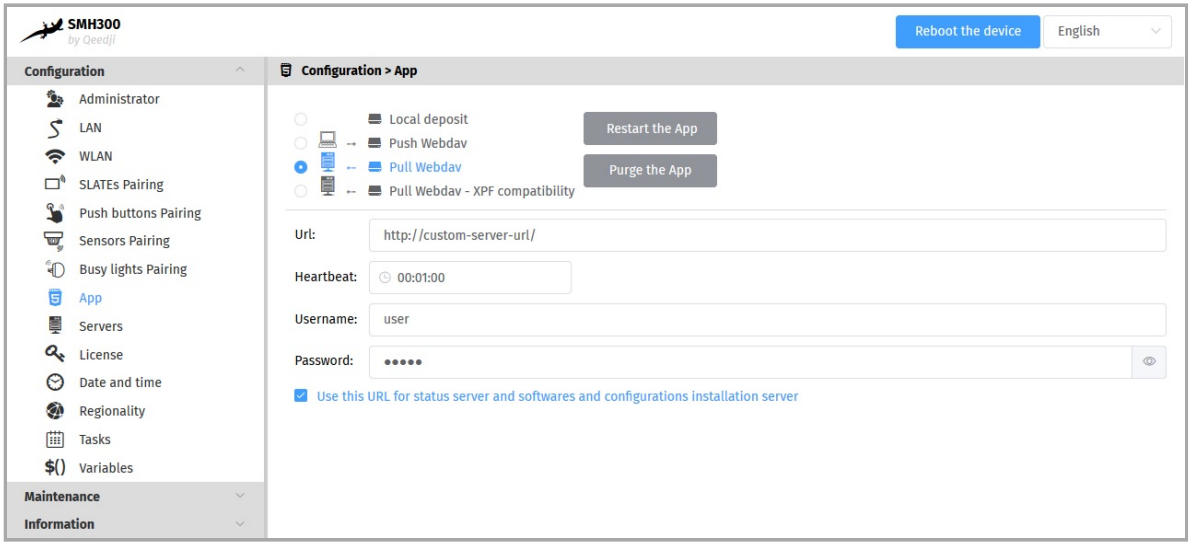
> ☛ *App development is reserved for advanced users with software development skills. The content of the App must contain at least these 2 files `manifest.xml` and `player.html`. Then archive your App in one of the supported formats: `*tar.gz, *.zip, *.tar, *.tgz`. App examples are available at github SDK-G4 API (PDF example). For more information, contact support@qeedji.tech.*

- `Push WebDAV` : Configure the device to receive a published App from any WebDAV client or compatible software suite. Once the App is received, its content is immediately played.



☛ *To find out which software suites are capable of publishing an App on `Qeedji` devices, contact support@qeedji.tech.*

- `Pull WebDAV` : allows you to configure the device so that it can regularly retrieve an App from a remote WebDAV server. Once the App is retrieved, its content is immediately played.



Fill in the fields below correctly:

- `URL` : URL of the remote server's WebDAV frontend. For example: `URL` : http://domain:8080/.directory/
- `ID/Password` : login and password of the remote server's WebDAV frontend.
- heartbeat: in *HH:MM:SS* format, time to connect to the remote server (default: 1 minute).
- option: `Use this URL for the status server and the software and configuration installation server` :
  - if enabled, this option allows, based on the defined URL, to automatically set the URLs of the remote servers for:
    - firmware upgrade and configuration scripts distribution:
      - `URL` + suffix `.setup/` .
    - the diffusion of the device status:
      - `URL` + suffix `.devices-status/` .
  - if disabled, this allows you to set specific remote server URLs.

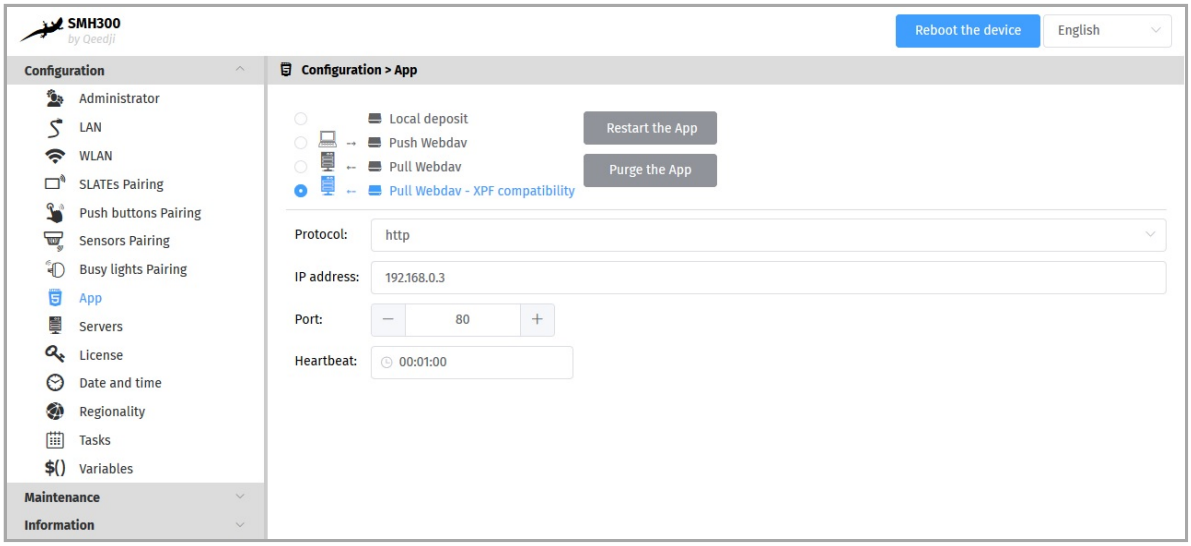
☛ *The user preference `innes.app-profile.addon-manager.*.*.*.http-downloader.validity-calendar` allows to store the contents of an ICAL file defining the validity range for triggering firmware upgrade and configuration scripts.*

☛ *The user preference `innes.app-profile.manifest-downloader:g3.*.*.*.validity-calendar` allows to store the content of an ICAL file defining the validity range for device content updates.*

☛ *The user preference `innes.launcher.status.validity-calendar` allows to store the content of an ICAL file defining the validity range for the diffusion of the device status (status.xml).*

☛ *To find out which software suites are able to publish on a remote server, an App supporting `Qeedji` devices, contact support@qeedji.tech.*

- `Pull WebDAV - XPF Compatibility` : allows you to configure the device so that it can regularly retrieve XPF content from a remote WebDAV server and transform it into an App. Once the App is generated, its content is immediately played.



☛ *The user preference `innes.app-profile.manifest-downloader:g2.*.*.*.validity-calendar` allows to store the content of an ICAL file defining the validity range for content updates of devices in `Pull WebDAV - XPF compatibility` mode.*

Fill in the fields below correctly:

- `Protocol` : *http* or *https*,
- `IP address` : IP address of the remote server (XPF compatibility),
- `Port` : port used by the remote server (XPF compatible),
- `Heartbeat` : in *HH:MM:SS* format, time to connect to the remote server (default: 1 minute).

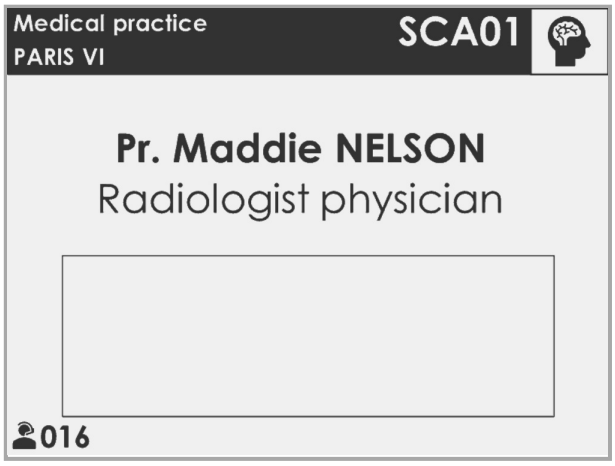
App examples

App for resources reservation display and control (Push WebDAV)
By regularly connecting to your calendar system, HTML Apps managing the display and control of meetings in the rooms of your building are available to work with media players. Using appropriate sensors, the device can, with this App, connect to an LDAP server to authenticate itself with an NFC badge and book, validate or delete meeting room reservations.

For further information, contact support@qeedji.tech.

Qeedji PowerPoint publisher for SLATE
Once this PowerPoint add-in is installed on your computer, it allows to:

- discover simply the SLATE available on your local network,
- selecting several of them,
- publish the slide content on your SLATEs (one slide per SLATE).

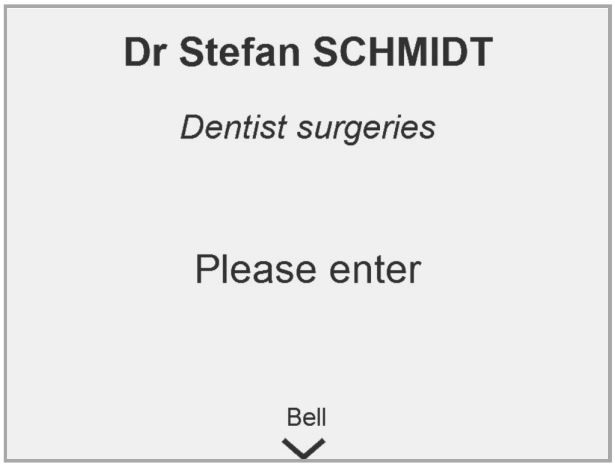


> ⚠ When the device is in standby, the .ppk content can not be updated.

For further information, refer to the chapter § Appendix 2: Qeedji PowerPoint publisher for SLATE..

Notification SLATE App
Once this App is installed, it allows to manage queues of people. Thanks to a additional *SlateNotificationApp* application running on your MS-Windows computer and behaving like a user remote control able to change the SLATE content in roughly 10 seconds, it:

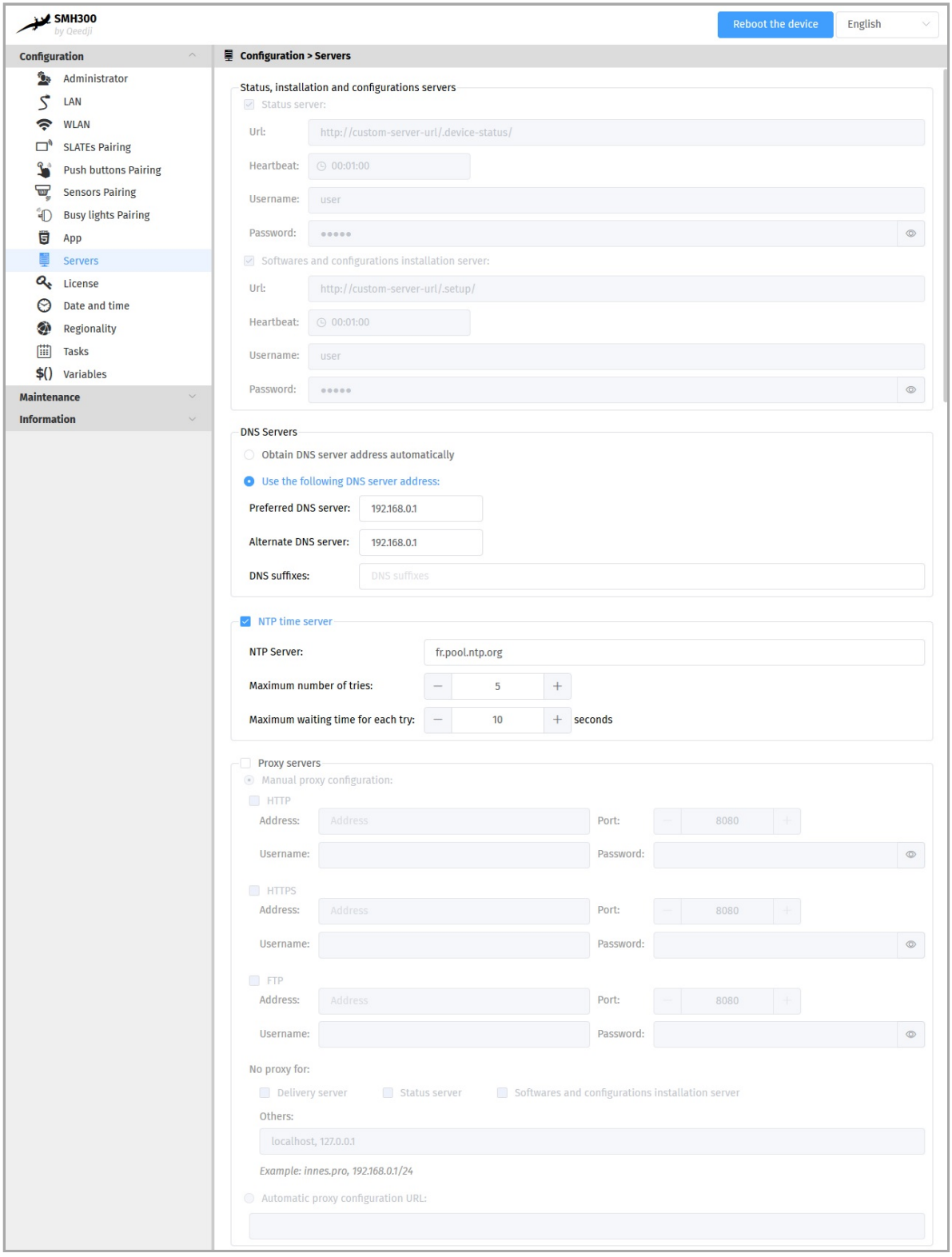
- sends a MS-Windows notification to a specific person as soon as a people is pressing on the *Ring the bell* button of a SLATE,
- consequently the specific person can choose to answer by remotely changing the content displayed on the SLATE between:
  - a *please enter* message,
  - a *busy message*,
  - a *custom live* message,
  - a *do not disturb* message.



For more information, contact support@qeedji.tech.

2.1.9 Configuration > Servers

In the `Configuration` pane, select the **Servers** menu to define the configuration of the servers peripheral to your device.

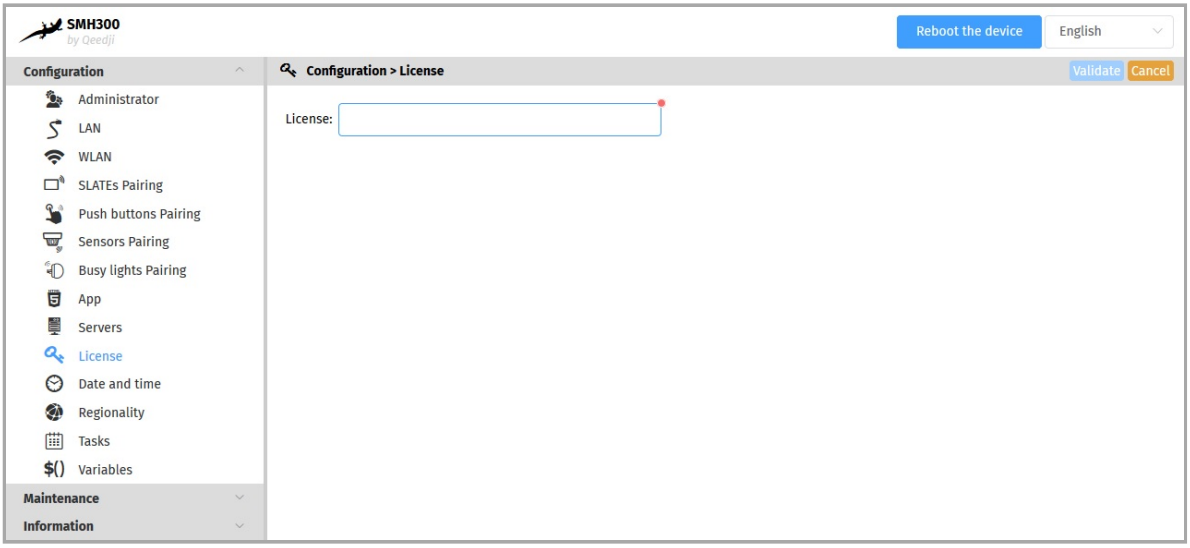


- status, software installation and configuration servers.
  - `Status server` :
    - `URL` : URL of the remote server's WebDAV frontend for the broadcast of the `.device-status/status.xml` device status file. For example: http://domain:8080/.directory/
    - `Username/password` : login and password for the remote server's WebDAV frontend connection.
    - `Heartbeat` : in *HH:MM:SS* format, period duration of the connection to the remote server (default: 1 minute).
  - `Software installation and configuration servers` :
    - `URL` : URL of the remote server's WebDAV frontend for hosting update software and configuration scripts. For example: ```http://domain:8080/.directory/````
    - `Username/password` : login and password for the remote server's WebDAV frontend.
    - `Heartbeat` : in *HH:MM:SS* format, period duration of the connection to the remote server (default: 1 minute).
- `DNS servers` ,
- `NTP Time Servers` : allows you to set a time server in order the device is always on time [1].
- `Proxy server` .

[1] If your device does not have access to the Internet, it is possible to turn an MS-Windows computer into an NTP server. For more information, contact your IT department.

2.1.10 Configuration > License

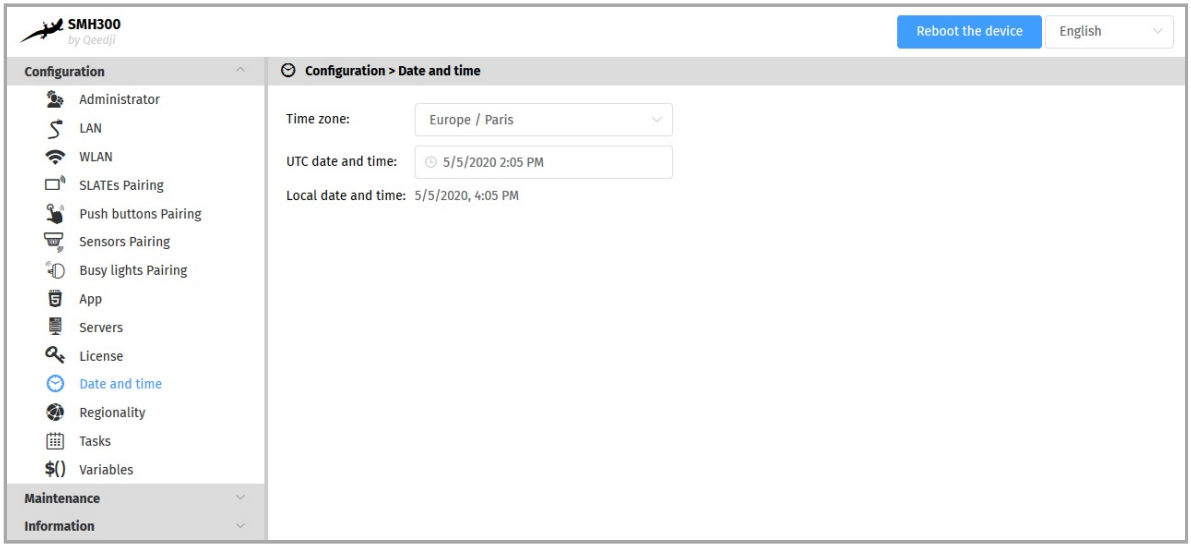
In the `Configuration` pane, select the **License** menu to view your device license number.



This license number is registered at the factory when the device is ordered. It is then sent to you by e-mail. If it has disappeared due to a handling error or after formatting your device, an error message indicating that the license is invalid will appear on your monitor. In this case, please re-enter the license for your device.

2.1.11 Configuration > Date and time

From the `Configuration` pane, select the **Date and Time** menu to check the system date and time of your device.

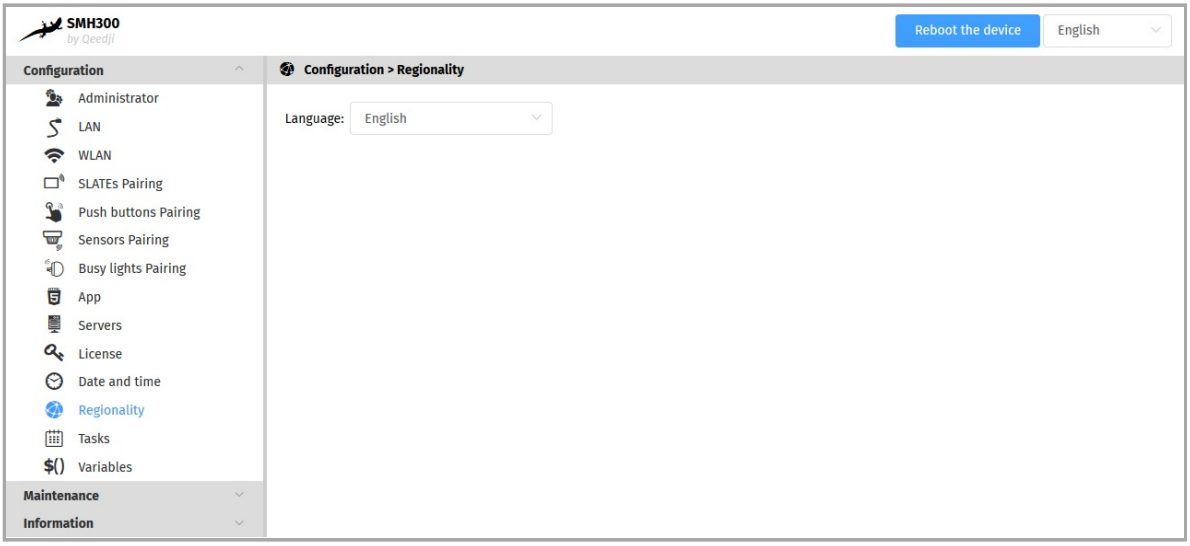


To update the date and time of your device, click on the `UTC Date and Time` value and then click the `Now` button.

> ☛ *Resetting the time involves a restart of the device immediately. If you have several configuration settings to change, it is advisable to adjust the date and time at last.*
>
> ☛ *It is advised that your device is on time. If your device is connected to the Internet, it is advised to synchronize the date and time on a Web NTP server. For further information, refer to the chapter § Configuration > Servers.*

2.1.12 Configuration > Regionality

From the `Configuration` pane, select the **Regionality** menu to choose the language in which information or error messages from the device should be displayed.



The supported languages are:

- *English*,
- *Spanish*,
- *German*,
- *French*.

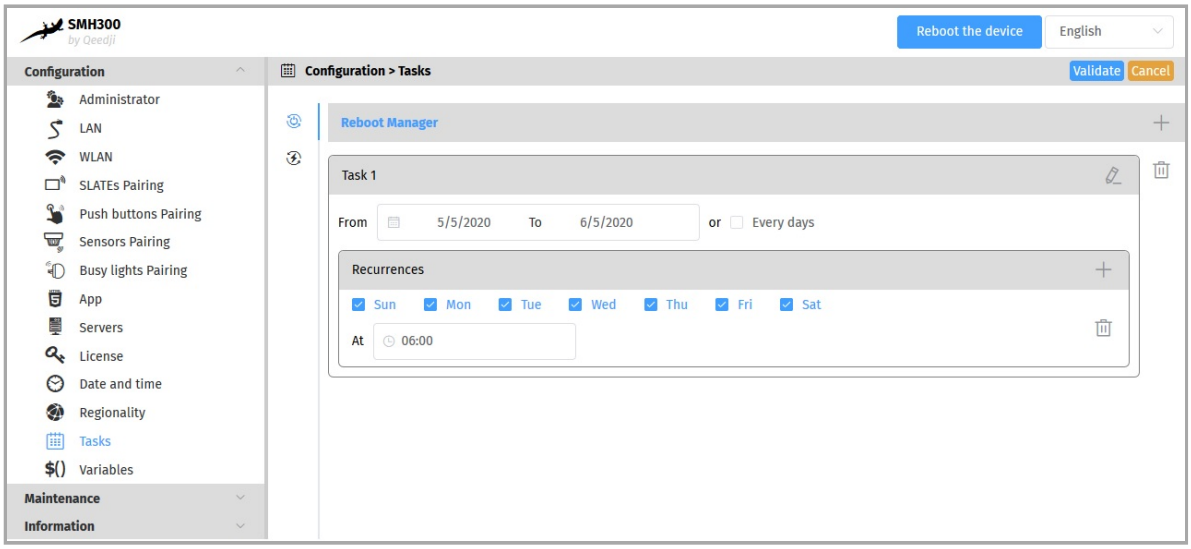
2.1.13 Configuration > Tasks

From the `Configuration` pane, select the **Tasks** menu to:

- program a device reboot task,
- program an energy management task for the appliance to reduce its energy consumption.

Device restart tasks

To create a restart task, click on the button and then the `+` button.



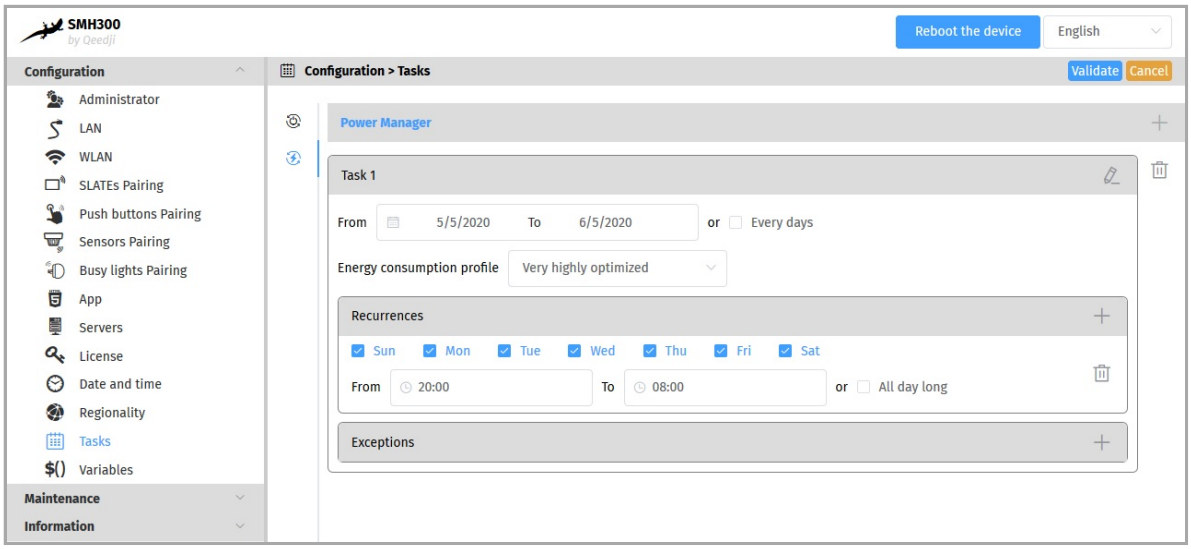
It is therefore possible to program in time several reboot occurrences whose parameters are stored in an ICAL format in the user preference `innes.reboot-manager.calendar`.

Example of value (ICAL format):

```
BEGIN:VCALENDAR
VERSION:1.0
BEGIN:VEVENT
SUMMARY: Reboot Task 1
DTSTART:20200407T091800
DTEND:20200407T091805
RRULE:FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;UNTIL=20200507T235959
END:VENT
END:VCALENDAR
```

Device power manager tasks

To create a device power manager task, click on the button and then the `+` button.



The possible values programmable in time are

- *Very highly optimized*,
- *Highly optimized*,
- *Optimized means*,
- *Nominal mode*.

It is possible to create several energy manager tasks in the same day. These settings for scheduled power level, start time, end time, occurrence, and exception are stored in ICAL format in the user preference `innes.power-manager.calendar`.

Example value (ICAL format):

```
BEGIN:VCALENDAR
VERSION:1.0
BEGIN:VEVENT
SUMMARY:Standby Task 1
X-POWER-MANAGER-LEVEL:MIN
DTSTART:20190805T090000
DTEND:20190805T120000
RRULE:FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;UNTIL=20200416T0000
END:VENT
END:VCALENDAR
```

☞ *The Power Manager task scheduled at the Web interface has no effect when another sleep task is scheduled within the App.*

In this version, here is the state of the device when the power manager is in the *Very highly optimized* state:

Function	**Associated User Preferences**
Sound: inactivated	`innes.power-manager.level.min.<>.mute` = true
Volume: 0%	`innes.power-manager.level.min.<>.volume` = 0

In this version, here is the state of the device when the power manager is in the *Highly optimized* state:

Function	**Associated User Preferences**
Sound: activated	`innes.power-manager.level.low.<>.mute` = false
Volume: 10%	`innes.power-manager.level.low.<>.volume` = 10

In this version, here is the state of the device when the power manager is in the *Medium Optimized* state:

Function	**Associated User Preferences**
Sound: activated	`innes.power-manager.level.high.<>.mute` = false
Volume: 80%	`innes.power-manager.level.high.<>.volume` = 80

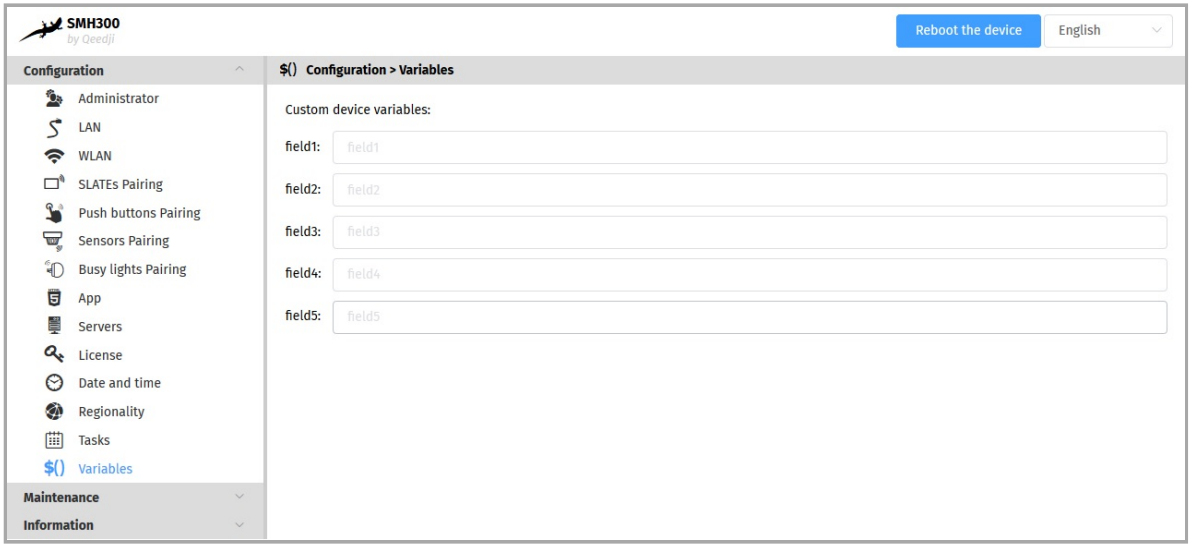
In this version, here is the status of the device when the power manager is in the *Nominal mode* state, meaning the default mode when no other power manager tasks are running.

Function	**Related User Preferences**
Sound: activated	`innes.power-manager.level.max.<>.mute` = false
Volume: 100%	`innes.power-manager.level.max.<>.volume` = 100

☞ *The values of these user preferences are all modifiable.*

2.1.14 Configuration > Variables

From the `Configuration` pane, select the **Variables** menu to set variable (or TAG) values for this device.



The variable names are:

```
- `field1',
- `field2`,
- `field3`,
- `field4`,
- `field5`.
```

Variable values can only contain characters from the ASCII-7bits table.

These variable values can then be used in Apps to perform specific processing for certain devices only.

2.1.15 Maintenance > Middleware

Connect to the device configuration Web interface by entering the URL in your Web browser. `http://<device-ip-addr>/` . From the `Maintenance` pane, select the **Middleware** menu to view the version of the middleware installed on your device.

> ☛ *Corrective and evolutive maintenance software versions are regularly made available in the support tab of the official `Qeedji` website https://www.qeedji.tech. It is therefore advisable to regularly update your device. From this website, download the latest version available for your device model. Unzip the `.zip` archive and get the `.frm` file.*

Drop your `.frm` file in the `Drop file here` box or click to add one, then click on the `Send` button to update the `Gekkota OS` version of your device. Wait a few minutes, the time to load and install the new version. Go back to the configuration Web interface and check the new Gekkota OS version number of the device.

> ⚠ Do not electrically disconnect the device during the firmware upgrade. For more information, refer to the chapter § LED behaviour.

2.1.16 Maintenance > Logs

From the `Maintenance` pane, select the **Logs** menu to activate logs. The log levels are

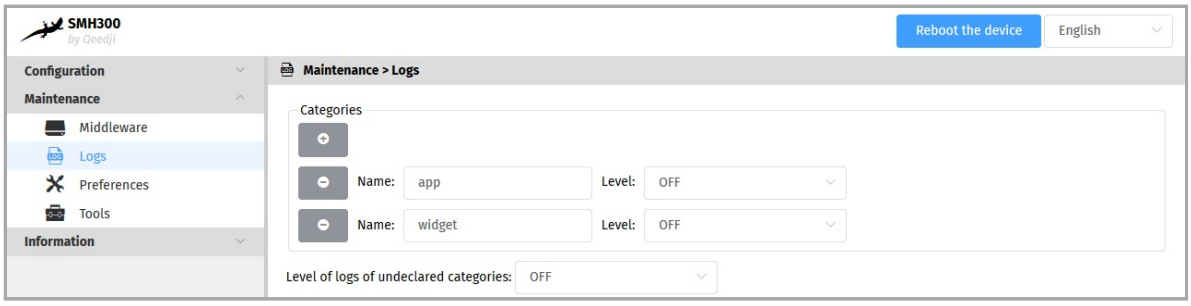
- `DEBUG` : activation of level logs: ERROR + WARN + DEBUG,
- `WARN` : activation of level logs: ERROR + WARN,
- `ERROR` : activation of level logs: ERROR,
- `OFF` : disabling logs.

Logs are compartmentalized according to software functions such as:

- `app` : App debug,
- `widget` : HTML widget debugging,
- `network` : debug of the network related layer,
- support may ask you to activate other logs in exceptional cases.

> ☛ *These logs can only be interpreted by software developers who are familiar with the software bricks that have been developed.*

Activating the logs with a level other than `OFF` should only be done after a request from `Qeedji` support.



> ⚠ Enabling traces `All trace levels of undeclared categories` with a `DEBUG` or `WARN` level can significantly disrupt the operation of the device.
>
> ⚠ After a debug session with support, in nominal operation, all levels should be reset to `OFF` .

2.1.17 Maintenance > Preferences

In the `Maintenance` pane, select the **Preferences** menu to view all the preferences.

The filter allows you to list only those preferences whose name contains the string entered in the filter. All the preferences have optimal default values.

> ⚠ Before changing any value of a preference, please consult your `Qeedji` support.

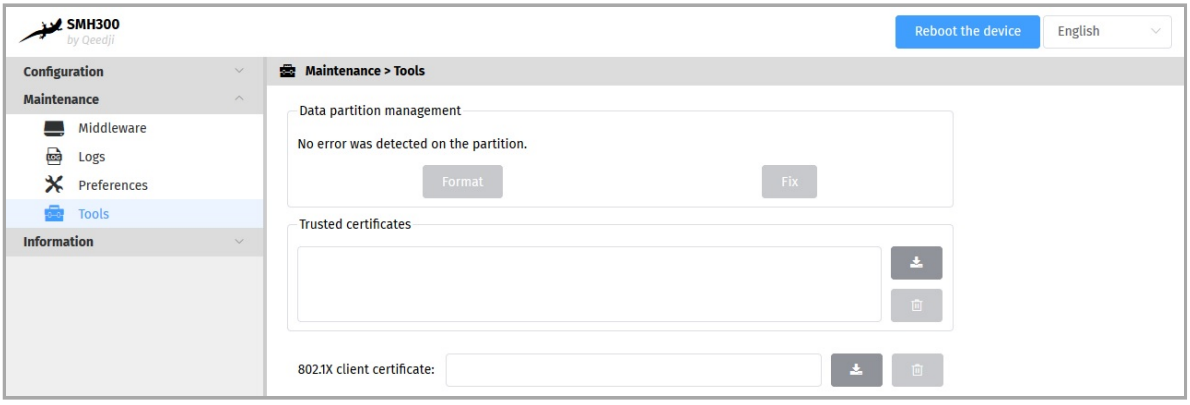
Double click on a preference to change its value.

The `Restore factory preferences` button resets a subset of preferences allowing the device to reprogram its factory preferences.

2.1.18 Maintenance > Tools

In the `Maintenance` pane, select the **Tools** menu to:

- `Correct` errors detected on the SD card data partition,
- format the data partition of the SD card,
- add `Trusted certificates`,
- add `802.1X client certificate`.



> ☛ *The format and correct buttons are only active if the Gekkota OS middleware has actually detected write or read errors on the partition.*

If the `Correct` button is accessible, clicking on the `Correct` button will repair the contents without rebooting an App. If the problem persists, and the `Format` button is available, clicking the `Format` button will format the contents. It is then necessary to republish an App.

> ☛ *If the problem persists after formatting the SD card, contact your `Qeedji` support.*

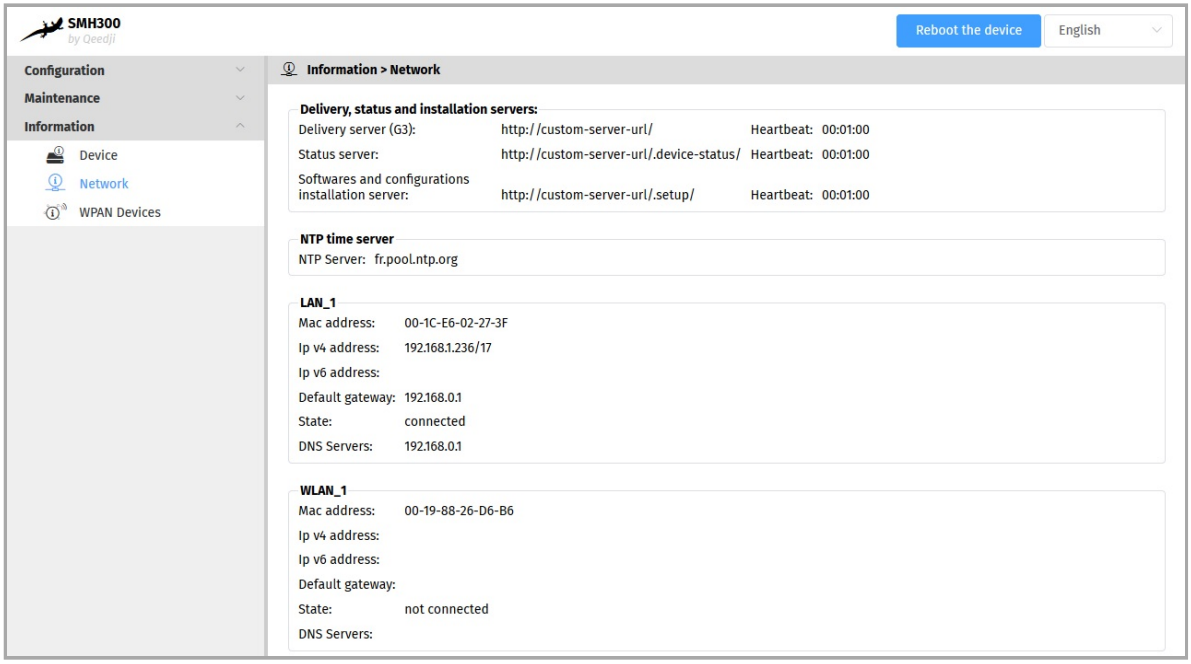
2.1.19 Information > Device

In the `Information` pane, select the menu **Device** to view system information about the device.

- `Middleware` : label and version of the embedded middleware,
- `Model` : model of the `Qeedji` device,
- `Hostname` : name of the device on the network,
- `MAC` : MAC address (value used in particular to generate the license key of the device),
- `UUID` : Universal Unique IDentifier,
- `PSN` : Product Serial Number.

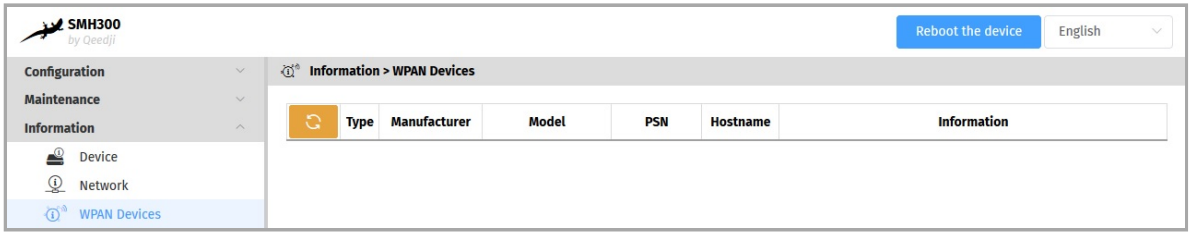
2.1.20 Information > Network

In the `Information` pane, select the **Network** menu to view a summary of the device's network configuration.



2.1.21 Information > Wpan devices

In the `Information` pane, select the menu **WPAN Devices** to see WPAN devices paired to your SMH300 device.

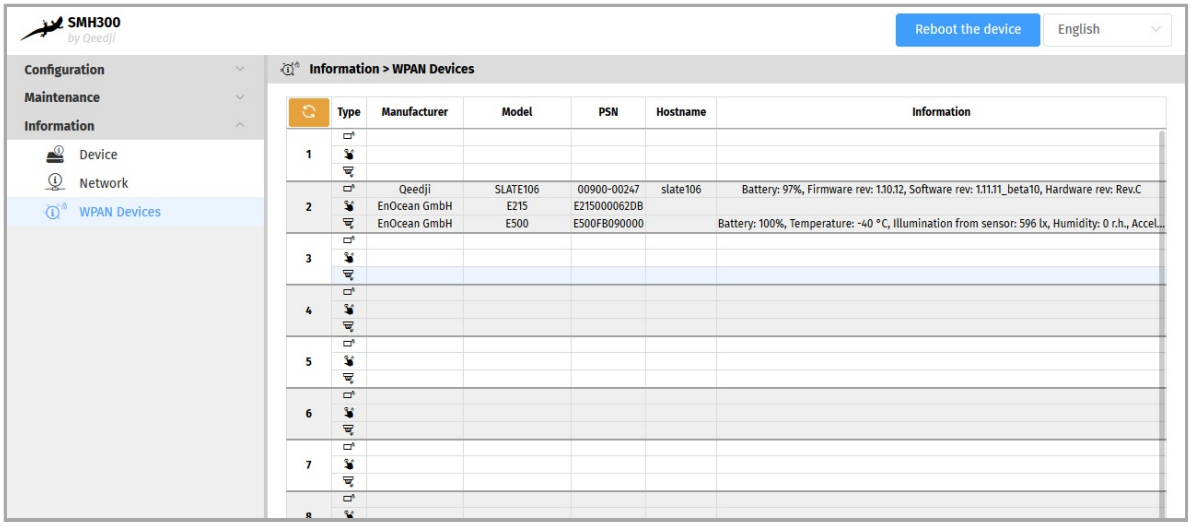


The panel allows to display system information like:

- 🔄: SLATE index column
- `Type` ,
- `Manufacturer` : Qeedji, EnOcean,
- `Model` : `Qeedji` model, EnOcean model,
- `PSN` : product serial number,
- `Hostname` : name of the SLATE device on the WPAN network,
- information:
  - for `Qeedji` model:
    - `Software rev` : software release version running on the SLATE,
    - `Firmware rev` : boot loader software running on the SLATE put a the factory (can not be updated),
    - `Hardware rev` : SLATE hardware board version,
    - `Battery` : SLATE battery level in percent updated every connection to the SLATE.
  - for EnOcean model:
    - `Battery` : 1 .. 100 %,
    - `Solar cell light level` : value in lx,
    - `Illumination from sensor` : value in lx,
    - `Magnet contact` [1]:
      - `Occupied` :
        - at least one people,
      - `Not occupied` :
        - no people anymore,
    - `RSSI` : value in dBm.

The button 🔄 allows to refresh the panel information.

Example:



2.2 Configuration by script

The smh300 can auto-configure when it can load a configuration script. The configuration-by-script can be either hosted on remote WebDAV server, or broadcasted by your DHCP server (code 66) or injected with an USB storage device. For further information, refer to the configuration-by-script application note on the https://www.qeedji.tech.

After an USB storage device insertion, wait aboout 20 seconds before removing the USB storage device. And wait that the device is rebooting (green LED displayed continuously for around 20 seconds).

In case the script is containing an error, the error is reported in the file `http://<device-ip-addr>/.status/status.xml`

2.3 Appendix 1: Device status (status.xml)

The SMH300 device is updating regularly its device status stored in its `/.status` WebDAV directory:

```
http://<device-ip-addr>/.status/
```

This file can be periodically sent to a remote WebDAV server for monitoring purpose.

Status.xml example:

```
<device-status xmlns="ns.innes.device-status">
<device>
<id-type>MAC</id-type>
<mac>00-1c-e6-02-20-e2</mac>
<hostname>smh300</hostname>
<uuid>05c00002-0000-0000-0000-001ce60220e2</uuid>
<modelName><gekkota_os-model></modelName>
<modelNumber>4.13.10</modelNumber>
<serialNumber>00920-00002</serialNumber>
<middleware>gekkota-4</middleware>
<field1/>
<field2/>
<field3/>
<field4/>
<field5/>
<ip-addresses>
<ip-address>
<if-type>LAN</if-type>
<origin>dhcp</origin>
<value>192.168.1.119/17</value>
</ip-address>
<ip-address>
<if-type>LAN</if-type>
<origin>auto</origin>
<value>fc00::21c:e6ff:fe02:20e2/64</value>
</ip-address>
</ip-addresses>
<addons/>
</device>
<status>
<date>2020-03-31T17:40:16.055055+02:00</date>
<launcher>
<power-manager level="MAX"/>
<manifest-metadata xmlns:pzpm="ns.innes.gekkota.manifest">
<pzpm:publish-size>0</pzpm:publish-size>
<pzpm:publish-generator>gekkota_ui</pzpm:publish-generator>
<pzpm:publish-date>2020-03-30T06:45:26.759Z</pzpm:publish-date>
</manifest-metadata>
<state>NO_CONTENT</state>
</launcher>
<storage>
<total unit="byte">1912532992</total>
<used unit="byte">22161408</used>
</storage>
<display-outputs/>
<setup>
<configuration>
<metadatas/>
<version>2019-06-21T13:25:25Z</version>
</configuration>
</setup>
</status>
</device-status>
```

2.4 Appendix 2: Qeedji PowerPoint publisher for SLATE

This appendix explains how to publish slides of a `.pptx` MS-Powerpoint presentation on SLATES paired to a SMH300 hub using your MS-Office PowerPoint, on which the `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In is installed.

> ☛ The `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In can deal with several SMH300 hubs with same MS-PowerPoint presentation.
>
> ☛ In this version, only the SMH300, whose WebDAV servers are available with the `http://` scheme (default value), are supported.

Prerequisite:

- the SLATEs need to be paired with the right index to each appropriate SMH300 hub. For further information, refer to the chapter § Configuration > SLATEs pairing.
- the SMH300 hubs need to be purged from any existing App. It is advised to set the App mode to the `Push WebDAV` value. For further information, refer to the chapter § Configuration > App.

Sum-up in a SLATE pairing table, like explained below, each SLATE with their pairing index for each SMH300 hub.

SMH300 hub hostname	SLATE PSN	SLATE index	PowerPoint section name	PowerPoint slide nb	Name	Profession
SMH300_hub1	00902-00951	1	1st floor	1	Pr. Maddie NELSON	Radiologist physician
SMH300_hub1	00902-00958	2	1st floor	2	Pr. John SMITH	Radiologist physician
SMH300_hub1	00902-00952	3	1st floor	3	Dr. Patricia DUCHON	General practitioner
SMH300_hub1	00902-00954	4	1st floor	4	Waiting room	1st floor
SMH300_hub1	*spare*[2]	5	1st floor	5		
SMH300_hub1	00902-00957	6	1st floor	6	Sonia DELACOURT	Anesthetist nurse

SMH300 hub hostname	SLATE PSN	SLATE index	PowerPoint section name	PowerPoint slide nb	Name	Profession
SMH300_hub2	00902-00956	1	2nd floor	7	Dr. Ashley ISAAC	Dentistry surgeries
SMH300_hub2	00902-00955	2	2nd floor	8	Dr. Xavier NELSON	Dentistry surgeries
SMH300_hub2	00902-00953	3	2nd floor	9	Pr. Stefan SCHMIDT	Cardiologist

[2] *spare* is indicating that a provisioning has been done for a future SLATE device at this index.

> ☛ In the example, the SLATE are spread on two floors. In case your MS-PowerPoint presentation needs to deal with two `SMH300` hubs or more, do prefer use a MS-PowerPoint presentation with sections. In case your MS-PowerPoint presentation deals with only one `SMH300` hub, do prefer use a MS-PowerPoint presentation without section.

Download the appropriate PPTX template and open it with your MS-Office PowerPoint.

The slides of the MS-PowerPoint templates given below are filling the right requirements to be displayed properly on the SLATEs:

- four grey level colors,
- layout with:
  - 4:3 format,
  - slidemaster layout for global modification,
  - a grey rectangle allowing to visualize the area reserved for the **optional** private message overlay which can be displayed thanks to the `Slate Message Overlay` mobile application.
- one MS-PowerPoint presentation template with sections, another one without section.
- The With sections PPTX template contains two sections:
  - *1st floor* section: made of 6 slides for the *SMH300_hub1*
  - *2nd floor* section: made of 3 slides for the *SMH300_hub2*.
- The Without section PPTX template contains no section.

PowerPoint presentation preparation

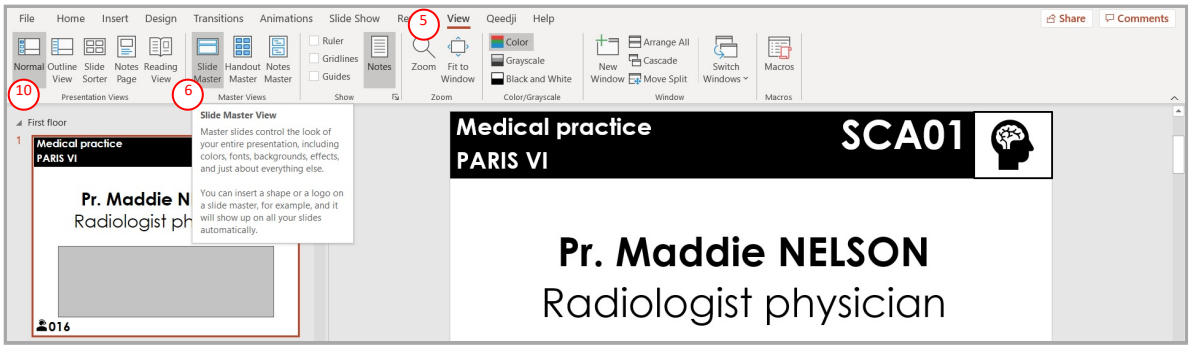
Following the previous pairing table, prepare the slide content with one slide per SLATE device.

> ☛ Given that the screen of the SLATEs devices has a 4:3 format, it is recommended to configure your PowerPoint presentation with a slide layout configured in the 4:3 aspect ratio as well. In the `Design > Slide Size` PowerPoint item, choose *Standard (4:3)* value instead of *Widescreen (16:9)* value.
>
> ☛ Keep in mind that the final rendering will be finally displayed on a `SLATE106` screen filling the following requirements: 800x600 pixel and four grey levels colors. Do use the grey colors shown below.

Grey color range	R-G-B (integer value)
Black	0-0-0
Dark grey	95-95-95
Light grey	159-159-159
White	255-255-255

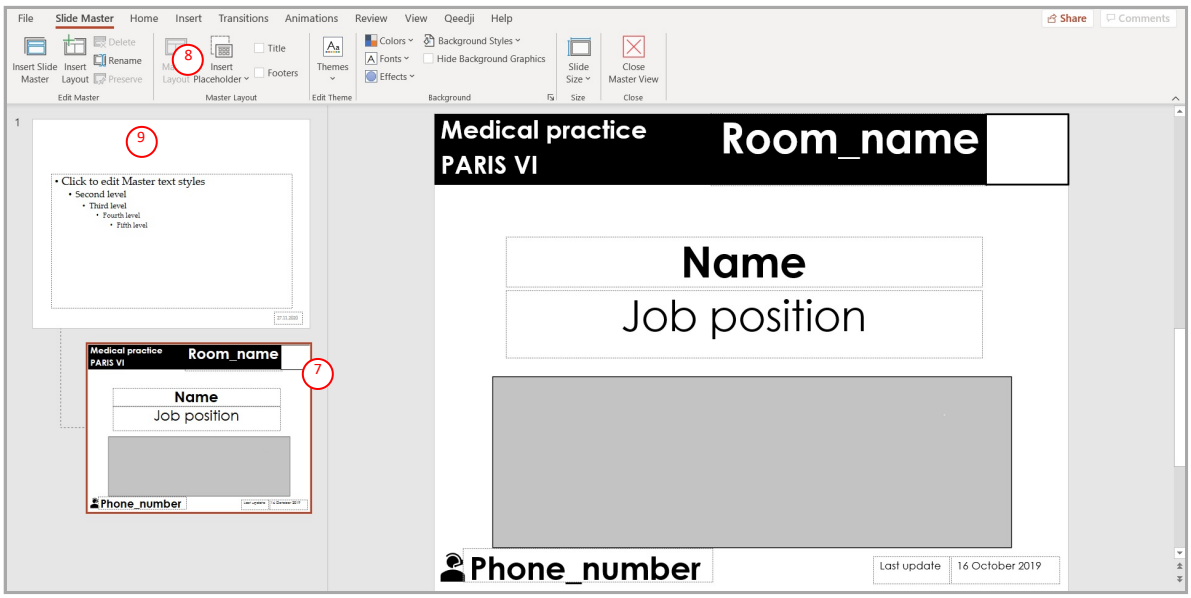
> ☛ Some sections can be used especially to publish on several SMH300 hub, with one section per SMH300 hub or shorten the publication time for a given SMH300 hub by avoiding to publish unuseful slides. With a right click on the slide thumbnail list on the left, it is possible to remove one or all the sections. To add a section after a slide, select a slide on the slide thumbnail list, right click, and choose `Add section`. You can for example rename the section with a name containing the hostname of the SMH300 hub or containing the building name where the SMH300 hub is installed. Do not gather more than ten slides per section. For further information about PowerPoint sections, refer to the Microsoft PowerPoint support about section.
>
> ☛ When there is **no section at all**, during the publication, the `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In switches automatically to another SMH300 hub every ten slides. Ten is the max. number of SLATEs supported per SMH300 hub.

In case you need to modify the PowerPoint layout template, the good practise is to modify the *Slide Master*. In the `View` (5) menu, click on the `Slide Master` (6) ribbon item.



Then:

- select the child `Slide Master` (7) to change texts or add new placeholders (8) for the common layout.
- select the parent `Slide Master` (9) to bring shape modifications (increase place holder size, change color) for the common layout,



> ☛ Return to `Normal` (10) view to edit the text which is different for each slide.

Change the layout and the content according to your needs. Add as much slides as required.

Qeedji PowerPoint Publisher for SLATE: installation

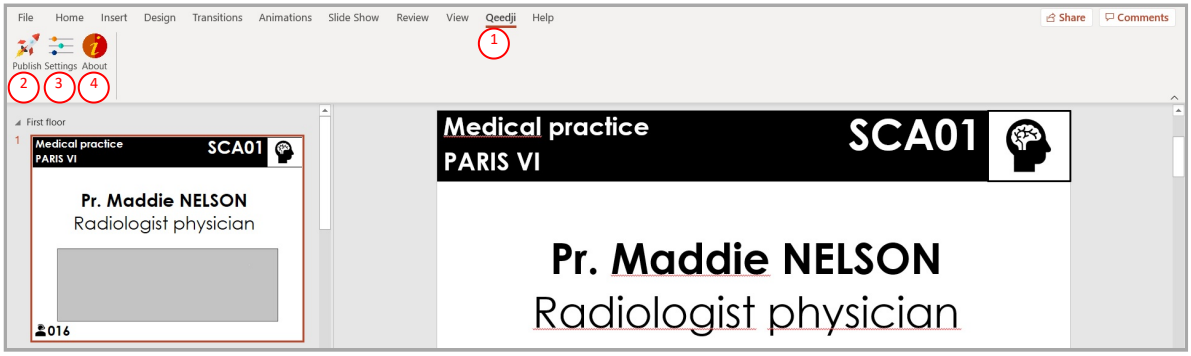
The `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In needs to be installed once:

- download the appropriate installer (.msi file):
  - Qeedji PowerPoint Publisher for SLATE (nt_ia64) for your *MS-Office* (nt_ia64),
  - Qeedji PowerPoint Publisher for SLATE (nt_ia32) for your *MS-Office* (nt_ia32).
- execute the installer and choose the `Everyone` or `Just for me` installation according to your needs. For example, choose `Just me`,
- press *Next* at each step by checking the default installation settings.

> ☛ Choosing `Everyone` may require to run the PowerPoint with the Administrator rights to be able to inactivate the `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In afterwards.

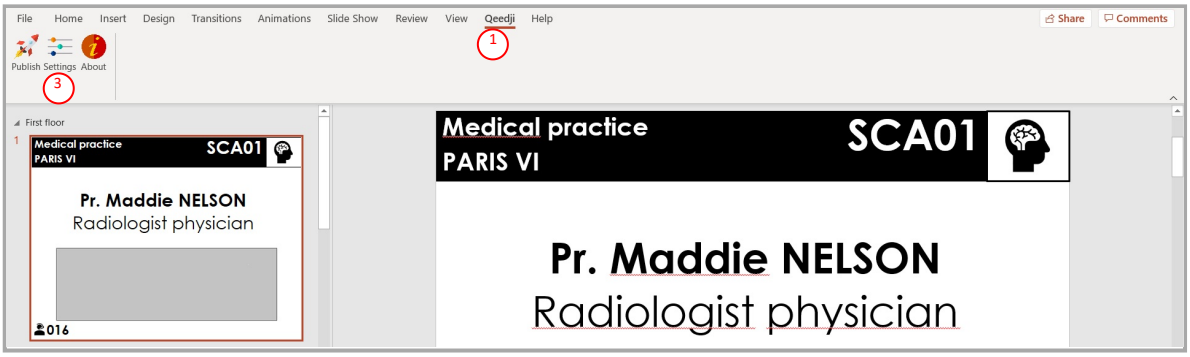
Open MS-Office PowerPoint and check that a `Qeedji` (1) menu has appeared. Clicking on it makes appear a `Qeedji` ribbon which has 3 items:

- `Publish` (2),
- `Settings` (3),
- `About` (4).



> ☛ If the `Qeedji` menu does not appear after a successful installation, contact support@qeedji.tech.
>
> ☛ In the `Qeedji` ribbon, click on the `About` (4) item to see the version of the `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In.
>
> ☛ For older computer, it could be requested to install first *.NET framework version 4.X.Y* before installing the `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In.
>
> ☛ The same language is used for `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In interface and MS-Windows.
>
> ☛ In case you need to upgrade `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In, it is required to close MS-Office PowerPoint and open it again to use the new version.
>
> ☛ In case you need to uninstall `Qeedji PowerPoint Publisher for SLATE` PowerPoint Add In, use the `Add or remove programs` Windows menu, then remove the `Qeedji PowerPoint Publisher for SLATE` program.
>
> ☛ In some rare cases, the warning message *PowerPoint has problems with the Qeedji complement. If the problem persists, disable this add-on and check for updates. Do you want to disable it now? (yes/no)* could be prompted when opening a MS-Office PowerPoint. In this case, do ignore the message by clicking *No*. It should not prevent the `Qeedji PowerPoint Publisher for SLATE` to work properly.

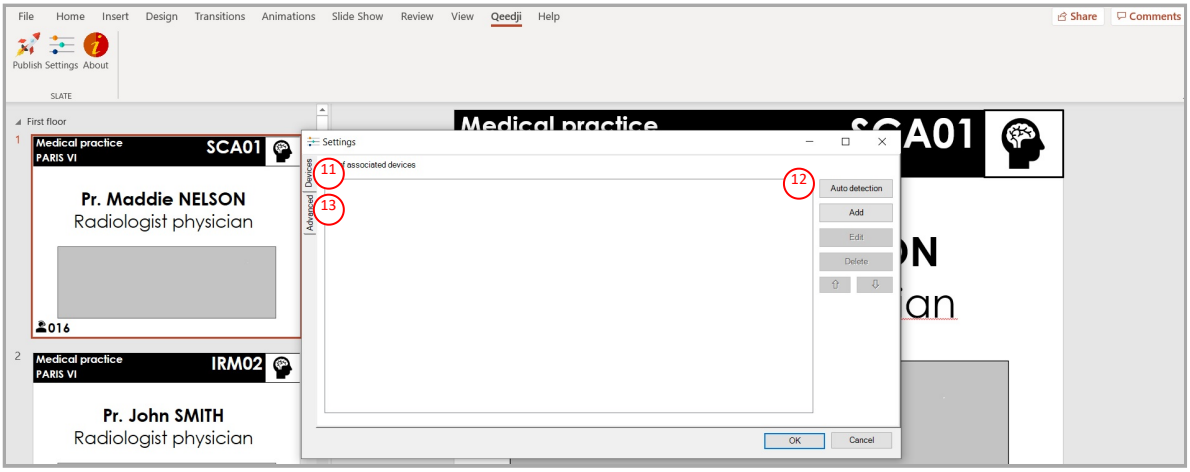
Qeedji PowerPoint Publisher for SLATE: register one or several SMH300 hubs



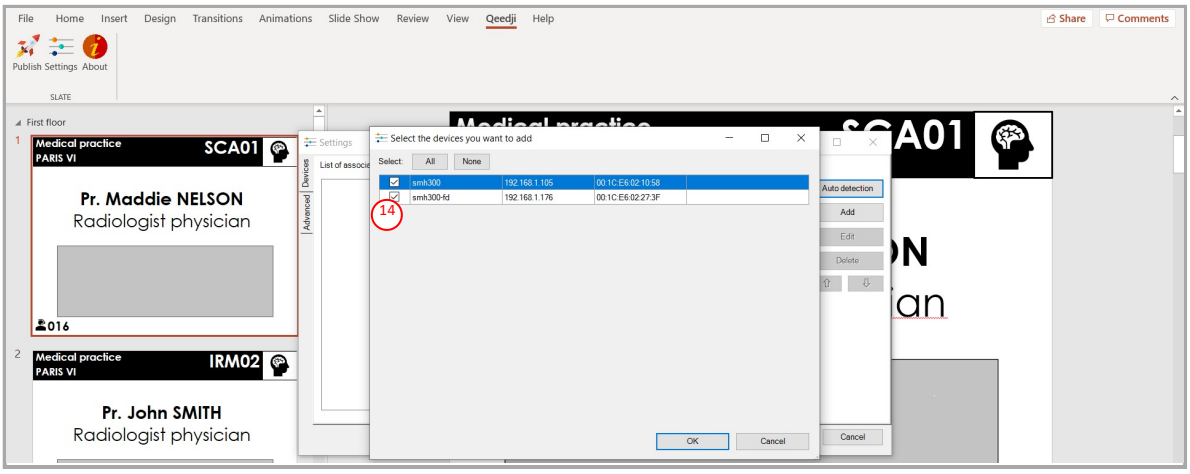
To register one or several SMH300 hubs, open you MS-Office Powerpoint presentation then:

- click on the `Qeedji` (1) menu,
- on the `Qeedji` ribbon, click on the `Settings` (3) item to access to the SMH300 hub registering panel.

On the `Advanced` (13) tab, you can define a *Background color* with a color picker. The background color is only used when the `Slide Size` is not *Standard 4:3*. On the `Devices` (11) tab, press on the `Auto detection` (12) button to detect the SMH300 hubs available on your local network.



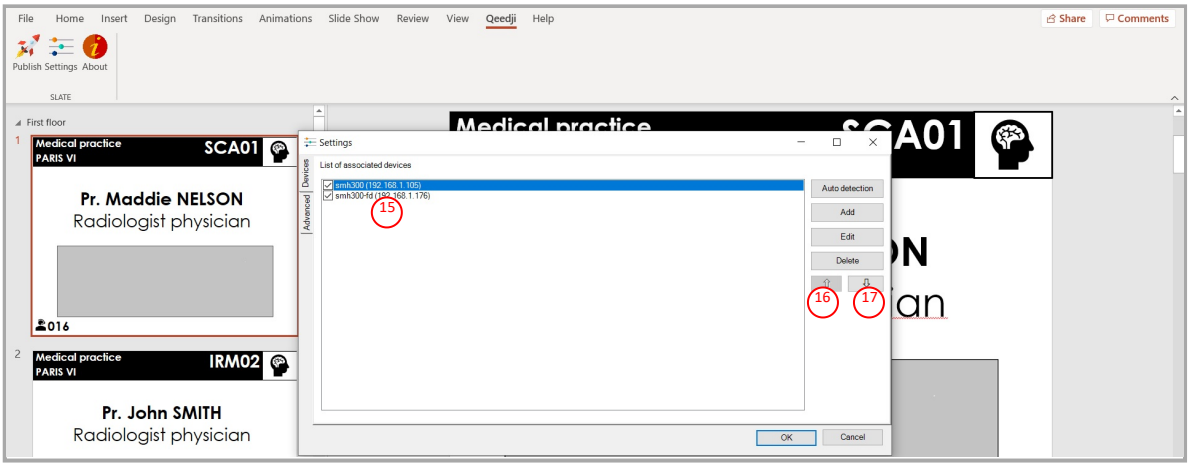
Select (14) the appropriate SMH300 hubs to create a list of appropriate SMH300 hubs as target for the MS-Powerpoint presentation.



Select then the only SMH300 hubs on which you want to publish, by double clicking on them.

> ☛ The SMH300 hub sorting order in the list is decisive because it is taken into account during the publication. The slides of the first section, or the first 10 slides, are always affected to the SMH300 hub located at the top of the list. Then the publication is continuing with the next SMH300 hub located immediately below, and so on.

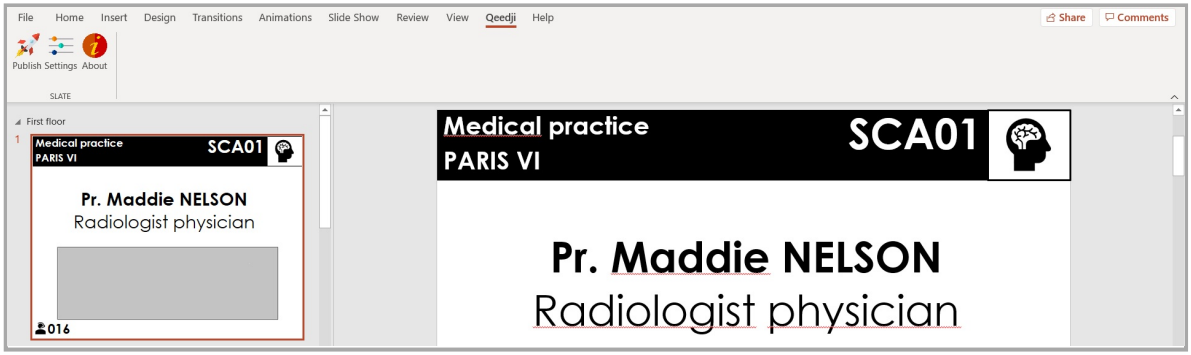
Select a `SMH300` hub and use the *up* (16) arrow or the *down* (17) arrow to sort them in the right order to match the MS-PowerPoint sections.


File
Home
Insert
Design
Transitions
Animations
Slide Show
Review
View
Qeedji
Help
Share
Comments
Publish
Settings
About
SLATE
First floor
Medical practice
PARIS VI
SCA01
Pr. Maddie NELSON
Radiologist physician
016
Medical practice
PARIS VI
IRM02
Pr. John SMITH
Radiologist physician
Settings
List of associated devices
Devices
Advanced
smh300 (192.168.1.105)
smh300-fd (192.168.1.176)
15
Auto detection
Add
Edit
Delete
16
17
OK
Cancel

Qeedji PowerPoint Publisher for SLATE: publish

To publish a content on your SLATEs through the SMH300 hub, open you MS-Office Powerpoint presentation. Then:

- click on the `Qeedji` (1) menu,
- on the `Qeedji` ribbon, click on the `Publish` (2) item.



☛ Before publishing with the `Publish` item, it is advised to check in the `Settings` item, that the registered SMH300 hubs are consistent and sorted in the right order.

The *Publishing status report* is showing whether the publishing on each SMH300 hub has succeeded or not:

- `Publishing succeeded` : the publication has succeeded
- `Publishing failure (Error: 503)` : the publishing has failed. In this case, check the network connection between your computer and the SMH300 hub.

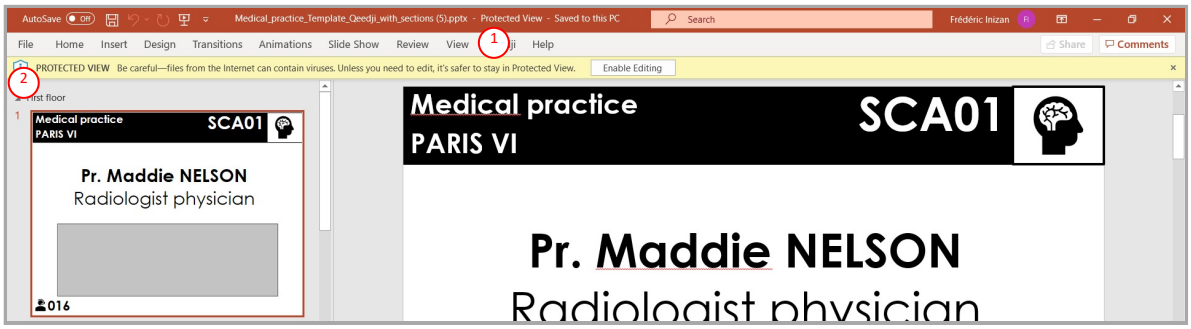
Publishing status report example:

```
1/2 - Publishing on device: *BLEAccessPoint1* (192.168.1.121)
- Publishing of the slide: 1 on the SLATE: 1/6
    Publishing succeeded
- Publishing of the slide: 2 on the SLATE: 2/6
    Publishing succeeded
- Publishing of the slide: 3 on the SLATE: 3/6
    Publishing succeeded
- Publishing of the slide: 4 on the SLATE: 4/6
    Publishing succeeded
- Publishing of the slide: 5 on the SLATE: 5/6
    Publishing succeeded
- Publishing of the slide: 6 on the SLATE: 6/6
    Publishing succeeded

2/2 - Publishing on device: *BLEAccessPoint2* (192.168.1.181)
- Publishing of the slide: 7 on the SLATE: 1/3
    Publishing succeeded
- Publishing of the slide: 8 on the SLATE: 2/3
    Publishing succeeded
- Publishing of the slide: 9 on the SLATE: 3/3
    Publishing succeeded

Publishing completed
```

☛ The `protected view` may prevent to publish properly by returning this error: *Publishing failure (Error: Unable to save a copy of the current document)*. To work around, click on the `Enable editing` button before publishing.



☛ During the publication, the PowerPoint slides are immediately transformed into PPK content (propriety format) and copied into the appropriate WebDAV directories of the SMH300 hubs. For example, with the PPTX template with sections, the PPK are copied in the following directories:

```
http://<SMH300_hub1_ip_addr>/.output/1
http://<SMH300_hub1_ip_addr>/.output/2
http://<SMH300_hub1_ip_addr>/.output/3
http://<SMH300_hub1_ip_addr>/.output/4
http://<SMH300_hub1_ip_addr>/.output/5
http://<SMH300_hub1_ip_addr>/.output/6

http://<SMH300_hub2_ip_addr>/.output/1
http://<SMH300_hub2_ip_addr>/.output/2
http://<SMH300_hub2_ip_addr>/.output/3
```

☛ After the publication, wait until 15 minutes (default SLATE wake up policy), the time for the SLATE to update their content by BLE.

2.5 Appendix 3: Img2slate tool

Another `img2slate` tool supported by Qeedji allows to mix a PowerPoint layout with the employees data stored in an Excel file. For further information, contact support@qeedji.tech.

3.1 Technical specifications

Model	Manufacturer
SMA300	Qeedji

Processors	
CPU	Freescale iMX6
GPU	Vivante

Peripherals
2x USB 2.0 Host (Low/Full/High Speed)
1x Jack 3.5 mm configurable in GPIO or Infrared

Storage	Information
Internal Flash Memory for OS	
SD card	Qualified SD cards: SANDISK / SDSDAA-032G / 32 GB, SANDISK / SDSDB-032G-B35 / 32 GB, SANDISK / SDSDAA-008G / 8 GB

Middleware
Gekkota OS 4

Audio outputs
Jack 3.5 mm R+L stereo analog
Embedded with HDMI output

Network
1x Ethernet 10/100 BaseT

Options
WIFI WIFI 802.11 b/g (WIFI 3)

Power supply
12V DC (600mA)

Operating temperature	Storage temperature
+0°C to +35°C	-20°C to +60°C

Operating humidity	Storage humidity
< 80%	< 85%

Weight	Dimensions (WxHxD)
0,450 Kg	144 x 89 x 29 mm

Warranty
3 years

3.2 Conformities

In conformity with the following European directives:

- `LVD 2014/35/EU`,
- `EMC 2014/30/EU`.

4.1 Contacts

For further information, please contact us:

- **Technical support**: support@qeedji.tech,
- **Sales department**: sales@qeedji.tech.

Refer to the `Qeedji` Web site for FAQ, application notes, and software downloads: https://www.qeedji.tech/

```
Qeedji FRANCE
INNES SA
5A rue Pierre Joseph Colin
35700 RENNES

Tel: +33 (0)2 23 20 01 62
Fax: +33 (0)2 23 20 22 59
```

```
Qeedji GERMANY
INNES SA
Verbindungsbüro Deutschland
Lebacher Str. 4
66113 Saarbrücken

Tel: 09386-979 39-14
Fax: 09386-979 39-15
Mob: 0175 853 67 81
```