POPP HUB

Manual

011801

Info

This device is a control center (gateway) for Z-Wave home automation networks. It is used to control different single devices as well as complete defined scenes and actions combining device functions within the network. It needs only a few steps to get your Popp HUB up and running.

Product Description

This device is a certified Z-Wave Plus smart home controller which can be used to connect and control different Z-Wave devices within one network and additionally provides high-level Home Automation functionality (scripting etc.).

The Popp HUB functionality can be accessed via the Web UI, which can be opened in a browser on a PC, and also via iOS and Android applications. For custom integrations, HTTP / JavaScript API is available. The Popp HUB is based on Z-Way software stack from Z-Wave.Me. For more information about Z-Way software stack and its features, please see Z-Wave.Me forum at **https://forum.z-wave.me**

As a certified Z-Wave Plus device the HUB can communicate with all other Z-Wave certified devices regardless of vendor or year of origin and it implements the enhanced functions of Z-Wave Plus. The HUB can communicate in a secure environment if the other device supports the secure environment too. If not the controller will fall back to the normal communication mode automatically. During inclusion the use of secure environment can be suppressed for performance reason if desired.

In Z-Wave all non-battery powered device will act as routers for other devices to form a so-called meshed network.

Installation Guideline

1. **Connect the HUB** to your local network using Ethernet cable.
2. **Power up the controller.** After up to 2 minutes the HUB is ready to use and the white LED will breathe normal. Now you can **connect your computer or mobile device to the new WIFI Popp-xxxx** (xxxx=last 4 digits of MAC address displayed on device label, WIFI-password on label too). Attention: For security reasons the initial configuration is available via WIFI only. Later on you have more options.
3. **Point your browser to http://192.168.1.1. If you use a mobile device** install and start the Popp HUB app (Use the QR code on page 13).
4. The welcome screen displays your **unique device ID**. Remember it! Define your access password for the default login name 'admin' and your email for password recovery.
5. In case there is a firmware update you will see a message screen. Please confirm and update the firmware. Make sure not to un-power the device during the firmware update.
6. Now you can **access your controller from outside your home too** using the service **find.popp.me.** Use DEVICE_ID/LOGIN (e.g. 12345/admin) and your password.
7. Start adding Z-Wave devices and apps and have fun. To add your first Z-Wave device, go to ➲*Setup* ➲Devices ➲ *Z-Wave* ➲ *Add New* and follow the instructions.

The Popp HUB can be placed on the table or mounted on the wall using the mounting plate attached to the enclosure. It runs stand-alone (no connection to the outer world or to any other network) and connected to the Internet. In this case the device acts as WIFI router too.

The User Interface

The Web UI of the Popp HUB has two parts:
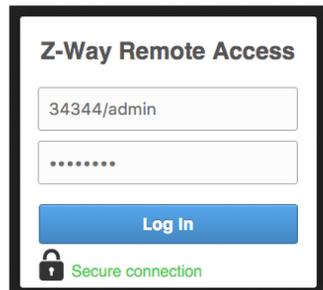- **Smart Home UI**
- **Expert UI**

When you log in into the Web UI, you get into the Smart Home UI.
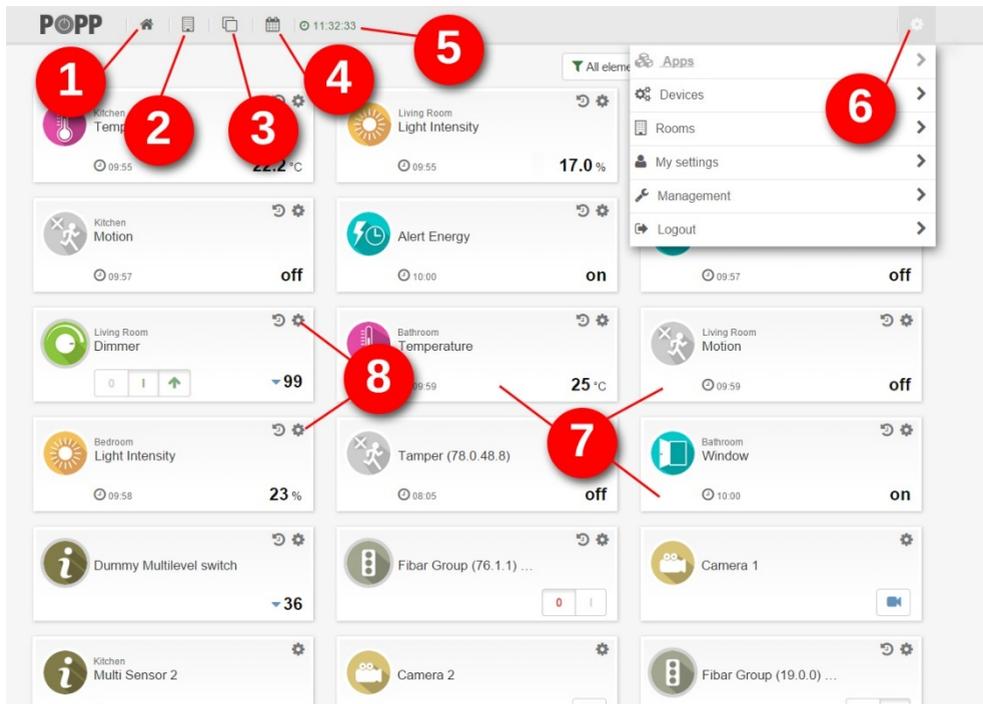
The Smart Home UI:
- Provides a subset of Z-Wave related functionality (most typically used functions).
- Provides high-level home automation functionality (applications, rooms, scripting etc.).
- Is available via the following URL: **http://IP-address:8083**

The Expert UI:
- Provides full access to low-level Z-Wave related functionality.
- Is available via the following URL: **http://IP-address:8083/expert**

When you log in into the Web UI (using the URL **http://IP-address:8083**), you get into the Smart Home UI. The Smart Home UI is intended for typical everyday home automation tasks, for high-level Smart Home configuration, and provides only basic operations for Z-Wave network configuration and administration. For advanced Z-Wave configuration, please use the Expert UI.

ill. 1: SmartHome UI

The user interface looks similar on different devices such as desktop pc, smartphone or tablet pc (both native app and browser) but it will adapt to the screen sizes. It allows controlling devices and read sensor status. Every function of any device is shown as one single ❼**Element** (In case a physical device has multiple functions – like switching and metering – it will generate multiple elements). All elements are listed in the ❸**Element View** and can be filtered by function type (switch, dimmer, sensor) or other filtering criteria.

Every element offers configuration interface for changing names, remove it from the screens etc. Important elements can be placed in the ❶**Dashboard**. Additionally, the elements can be accessed using room assignments. The ❷**Rooms** overview displays all existing rooms. In this area you can add new rooms and open existing rooms directly. Every change of a sensor value or a switching status is called an **Event** and is shown in the ❹**Timeline**. Filtering allows monitoring the changes of one single function or device.

All other functions such as time triggered actions, the use of information from the Internet, scenes plugin of other technologies and service are realized in **Apps**. These apps are ready-to-use scripts/templates that can add extra logic and functionality such as logic rules like "IF➜THEN", scene definitions, timers, interactions with external (non Z-Wave) devices connected via USB dongle or via internet etc. Some apps are built-in into the system. More can be downloaded from an app store. To use an app, you create an instance of this app and configure its properties. If useful you can create more than one instances of one single app. The apps can create none, one or multiple new elements and events. You can install new apps and manage existing apps using the ❻**Configuration Menu ➜ Apps**.

Furthermore, it's possible to change every single element's ❽**Configuration** directly.

Another thing you can find on the user interface is the ❺**System Time**.

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🏠 Menu and Dashboard
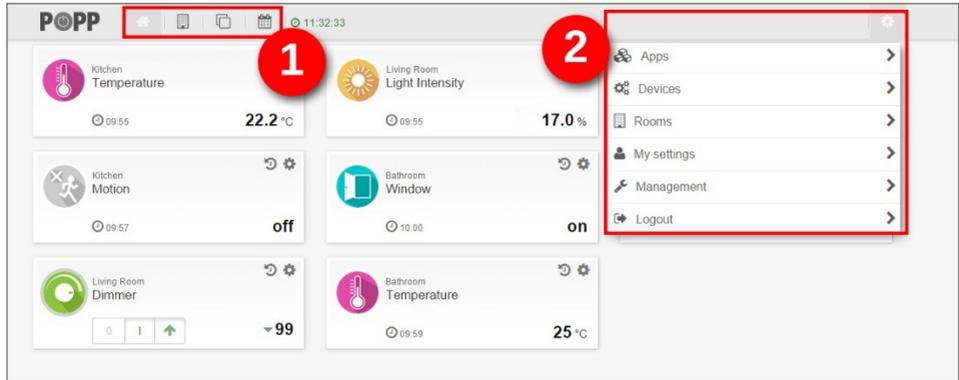
ill. 2: SmartHome UI – Dashboard

In the Smart Home UI's header 4 icons can be found [ill.2 (1)]. You can use these icons for navigation through the Smart Home UI (left to right: *Dashboard*; Rooms; *Element View;* Events/Timeline).

🏠 Dashboard:
Here you can find a selection of devices defined by yourself. You can control these devices and receive various information by different sensors (e.g. temperature, brightness, window open/closed).

📖 Rooms:
Here you can find a list of all created rooms (see also chapter **Configuration Menu / Rooms**) with assigned elements.

🗂 Elements:
Here you can find all devices connected to the Popp HUB (see also chapter **Configuration Menu** / **Devices**). Analogous to the Dashboard the Devices menu provides various device information and you can control the devices from here.

📅 Events (Timeline):
Here you can find a chronological list with all events so far (see also chapter **Event List**).

⚙ Configuration Menu:
At the header's far right you will find the button (gear wheel) for the Configuration Menu or Setup [ill.2 (2)].

🗂 Elements:
Here you can find all devices connected to the Popp HUB (see also chapter **Configuration Menu** / **Devices**). Analogous to the Dashboard the Devices menu provides various device information and you can control the devices from here.
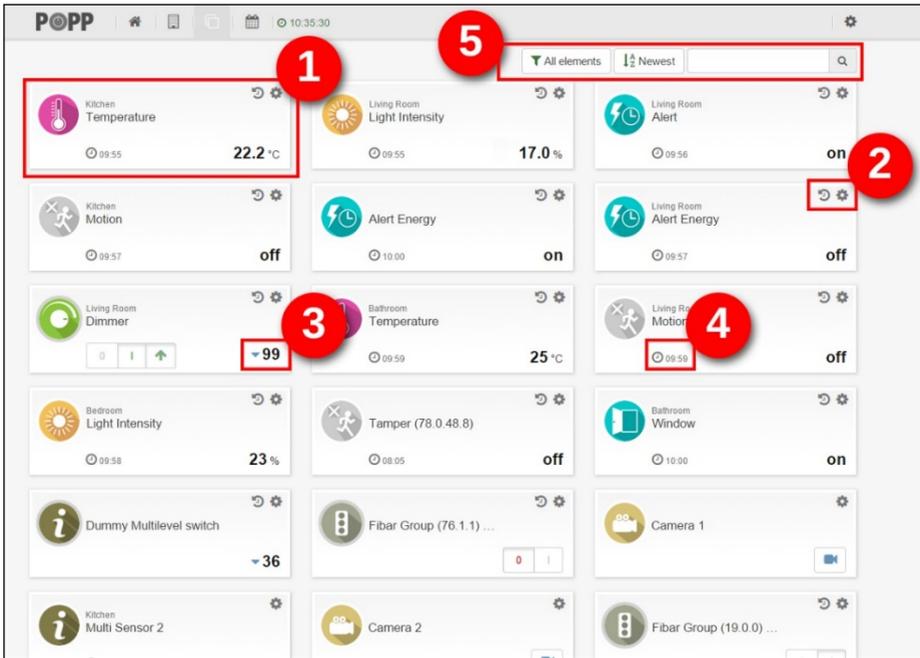
ill. 3: Basis elements (❶), Device configuration (❷), Device actions (❸), Polling time (❹), Filter and search (❺)

Once one device is connected to the control center (see also chapter *Configuration Menu / Devices*) its function will be displayed as a separate element in the **Element View** [ill.3]. If the device owns multiple functions (e.g. flood sensor: flood alarm and temperature) every function will be displayed as a separate element [ill.3 (1)]. If the device is battery powered, you will see the polling time (displays last communication between device and control center) bottom left [ill.3 (4)].

The so-called Wake Up (data exchange between one single device and the Popp HUB) takes place automatically from time to time. While sensors report and display measuring values, actuator perform some actions. These actions can be controlled directly [ill.3 (3)], e.g. with ON/OFF switches or arrows.

Through the gear wheel icon top right in the element's frame [Abb.3 (2)] you will reach the device's configuration menu where you can do different things:

- Change the automatic generated element name.
- Assign the element to one room (see also chapter *Configuration Menu* / *Rooms*)
- Add and remove element to/from the **Dashboard**
- Hide element (Element will be hidden in any view, but can be displayed again by using "Show hidden" button in "All elements" filter.)
- Deactivate elements (Element can not be used for any scene, app, module and is fully deactivated.)
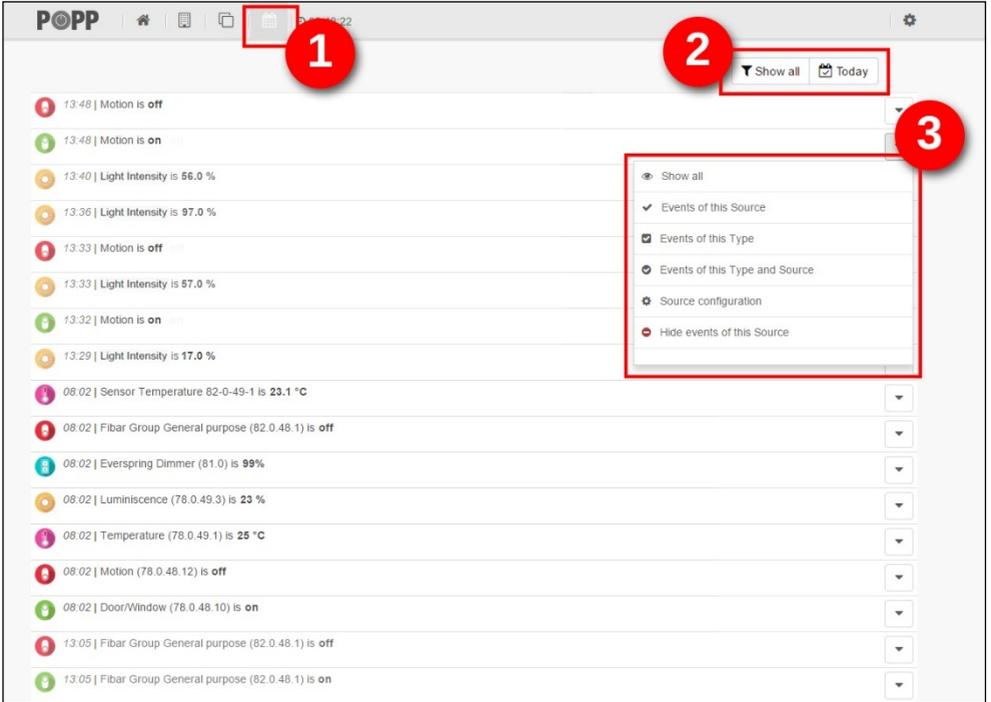- Assign free definable tags to any element

Not only devices will be displayed as elements. Plugins (apps) will be displayed as icons, too (see also chapter *Applications*). Thus the number of elements can grow very fast. But you can reduce the number of displayed elements by using the filter function [Abb.3 (5)].

The filter uses the following:

- (Device) Category
- Tag
- Free text search

The filter function is not available on the **Dashboard**.

▦ **Event List**

ill. 4: Event List (❶), Filter (❷), Event Filter (❸)

✿ **Configuration Menu (Setup)**

ill. 6: Configuration Menu

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The gear wheel symbol top right [ill.6] opens the configuration menu (setup). Here you can manage all of your smart home system's settings.

Applications
Opens the app store (**Online Apps**) as well as already downloaded (**Local Apps**) and currently activated (**Active**) modules.

Devices
Through this menu item you can connect and manage physical devices to your smart home center. Currently it's possible to integrate Z-Wave devices as well as IP-cameras and EnOcean devices (appropriate wireless stick needed).

Under menu item *Devices* you will find two buttons referred to any device type:
- „Add new"
- „Manage"

Add new devices
Z-Wave devices: Press the logo of the new device's manufacturer (ill.8 (2)). Thereafter you will see a list where you can choose the device you want to connect to the smart home control center.

You will receive a step-by-step instruction for preparation and inclusion of your new device. If the device is not listed yet, please press „Add Z-Wave Device and identify it automatically" or [ill.8 (1)]. Perhaps you will need the device's manual to start the inclusion process. Both ways lead to full range of functions, because Z-Wave identifies all the device's functions during the inclusion process.

Cameras: If your camera type is listed, please select and add necessary settings such as access data and ip-address. If your camera is not listed, please select the general "Web Camera" icon. Thereafter you will need the camera's manual to find out the camera's URL for device control and access to the image. Possibly our user forum and user support will help.

EnOcean devices: In case of a connected EnOcean stick you will see "EnOcean" as additional selectable device type. Please select your new EnOcean device from the manufacturer and product list. Thereafter this device will be ready-to-use immediately.

ill. 7: Add and manage devices
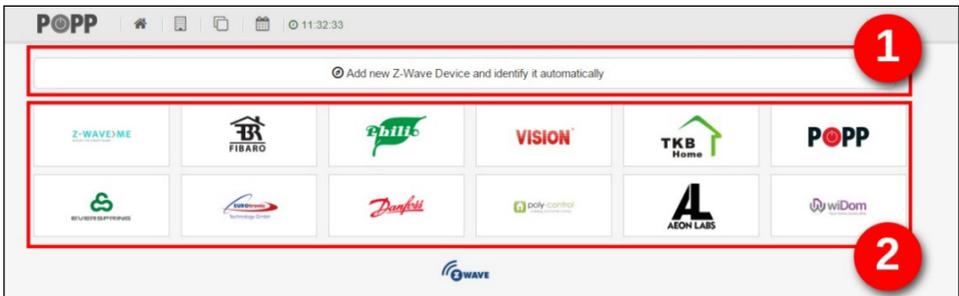
ill. 8: Add Z-Wave devices automatically (❶) or select a manufacturer (❷),

Manage devices

Pressing the „Manage" button [ill.7] opens device management screen. Here you can see the connected devices' status. Furthermore, you can open every device's own configuration menu.

ill. 9: Open Z-Wave device list (❶), check battery status (❷), check network status (❸)

Battery status: The tab **Battery status** [ill.9 (2)] gives you an overview about every battery powered device's battery status within your Z-Wave network. Normally Z-Wave device's battery have a life of 2 to 5 years. In addition to this overview list you will receive a warning message in the event list (see also chapter *Event List*).

Configuration: In the „Z-Wave devices" tab [ill.9 (1)] you can click every listed device to open its appropriate configuration view. Here you can – for example – rename, hide and unhide the device and assign to rooms. After including a new device, the settings will be opened automatically (see also chapter *Configuration Menu / Add new devices*).

Some Z-Wave devices have special configuration parameters which help to adjust the device to the user's needs. Use the button "Hardware configuration" in the configuration view. These parameters refer to the physical device only.

Network status: If there occur a problem with one device (defect, low battery, missing device, communication errors…), it will be displayed here. Use the appropriate link to get further information about the problem and possibly opportunities to solve the problem.

Rooms

At first you can create new rooms in this area. Additionally, it's possible to assign an individual picture to every room as well as all devices installed in the appropriate room. All assignments can be changed anytime.
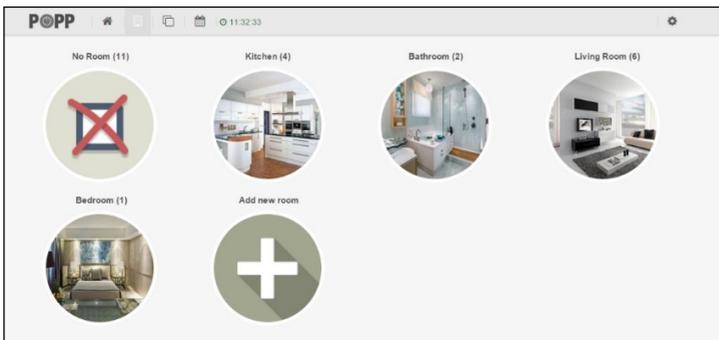
ill. 10: Room overview

Management [ill. 11]

Here you can find important system settings such as user management, remote access management, backup creation, system restore, firmware update, problem reporting and the opportunity to enter a token for app store access as well.

User management: If there are several persons having access to one smart home they will prioritize different information. Accordingly, it's possible to hide and unhide elements and information on the user interface. That will be realized by using user profiles. Every profile has its own settings, dashboard and event filter preferences.

In delivery state there is only the profile "Admin" existing and all events will be listed here. For login please use the user name *admin* with password *admin* as well. For security reasons don't forget to change the password individual.

If you create a new profile you have to assign a role to this profile. This role defines the appropriate user's access rights within the smart home system:

- **Admin:** unlimited rights
- **User:** Can control devices remotely and receives the devices' information. It's not possible to connect new devices or install apps to the smart home system.
- **Local user:** Identical rights as „user", but with limitation to the access which is only possible within the local network. There is no remote access available.
- **Anonymous user:** No rights

Additionally, you can assign rooms to every user where he will have access then.

Remote access: This menu item contains the ID for your remote access which can be used from outside via mobile app controlling devices and receiving information. The ID is unique and generated randomly. Please create an individual password for remote access in the appropriate field.

You can disable the remote access function by deactivating the "Enable Remote Access "checkbox. Sometimes it's needed for our support team to help. In this case it's necessary to activate the "Enable Remote Support Access" checkbox temporarily.

Backup: A backup file can be created that includes all custom configurations, downloaded apps and Z-Wave controller data. You should store this backup file on your computer. A completely reset controller couldn't be restored with this backup. If needed, please use the backup/restore functionality from the *Expert UI* (see also chapter **User Interface**)

Restore: Use this to overwrite current configuration. As described on *Backup* a completely reset controller couldn't be restored with this backup. It is recommended to use the backup/restore functionality from the ExpertUI.

Factory default: This will remove all already installed or updated apps, devices, settings etc.

Firmware update: If there is a newer *Smart Home UI* (Z-Way) version available you can start the update here.
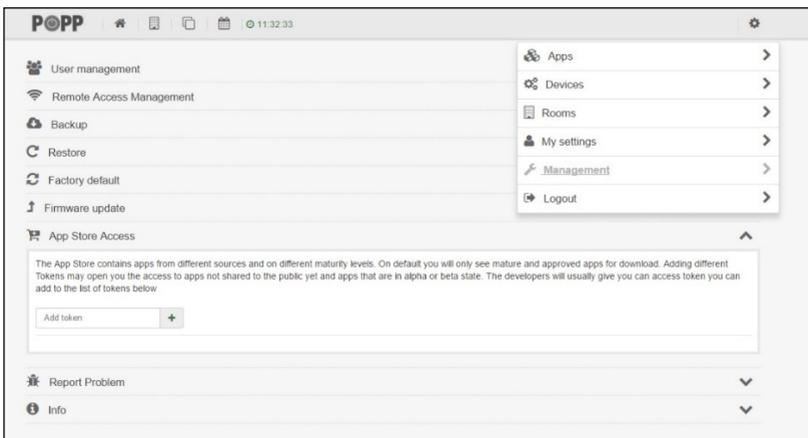
ill. 11: Smart Home management with various settings

App Store Access: By default, you have access to all online available applications verified by the Z-Way developers. Furthermore, app developers can give access to their own apps to limited user group. For this it needs a so called "token" provided by the app developer. If you have received such a token, please enter into the appropriate field under "App Store Access". After this the app will be displayed at ➲*Configuration Menu* ➲*Apps*

You can enter any number of tokens.

Report problem: If you identify a problem on Z-Way interface we would be pleased about your feedback. That gives us the opportunity to solve the problem in a timely manner.

Please note: This is no support form! It is dedicated to report bugs in the UI only. If you need support, please consult the support forums or see chapter *Support*

Info: Here you will find the firmware's and user interface's current version number.

My settings
Use this menu item to do some settings for your user interface:
- Profile name
- User e-mail
- Default language
- UI update rate (How often the screen will be refreshed.)
- Hide and unhide all device events
- Hide and unhide all system events
- Change password („My User Account")
- Expert view (Hide and unhide system apps.)

ill. 12: Profile management with various settings

⬢ Applications (Apps) – APPgrade your Home

Automations are a smart home's core. The Smart Home UI owns ready-to-use applications – so called **Apps** – which make the user's life easier. As known from smartphones ready-to-use apps for various applications are available. The user gets a ready program where he has to select some parameters only – for example devices included to the automation scene.
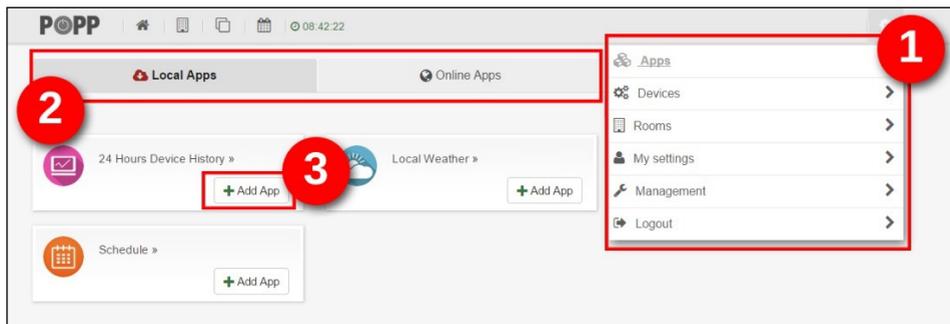
ill. 5: App Store can be chosen by "Apps" (❶), Tabs (❷), Add an application (❸)

Applications can be found under **Configuration Menu / Apps** [Abb.5 (1)]. Below this menu item [Abb.5 (2)] you can find the tabs „Local Apps", „Online Apps" and „Active". **Online Apps** contains an app store with downloadable apps and modules submitted from community members and verified by Z-Way developers. Additionally, it's also possible to display apps which aren't released from Z-Way developers. In this case you need a so called "Token" provided by the app's developer. Please enter this „Token" in the field „App Store Access" at **Configuration Menu / Management**

The **Local** tab displays all apps already downloaded. That can be for example:

Scenes
Common switch of various elements

Associations
Automatic switch of some elements by another element

Automations
Easy automatic control such as switching off the light after a defined time.

Complicated solutions such as a central heating control or an alarm system based on installed elements.

Plugins
Pre-configured modules for integration of ip-based devices or services (e.g. ip-camera, online weather,…)

Some applications (**Apps**) can be used in multiple instances. If you want to use various ip-cameras from one manufacturer for example, please download the appropriate ip-camera modules from the app store and go to **Local** tab. With the "+Add App" [ill.5 (3)] button you can add any number of the module to active elements list integrating several cameras.

In tab **Active** all current activated modules are listed. Please consider that **only local installed apps can be activated**. Activated apps/modules create new elements. These elements can – similar to all other basic elements – be renamed, assigned to rooms or assigned with attributes (see also chapter **Elements**).

LEDs and Buttons

The HUB provides multiple LEDs:

- 3 green Status LEDs on the left hand side:
  - CPU running, Ethernet working, WIFI operations
- White LED on Bottom:
  - Flashing: Inclusion State
  - Fast Flashing: Exclusion state
  - Breathing: Z-Wave Network Management Active
- White LED frame around the Box (Power and tamper state):
  - Off: No power or battery operated
  - Breathing: Normal state (After an update process it could take up to two minutes until the LED will begin to breath. That indicates completed update.)
  - Fast blinking: Tampered
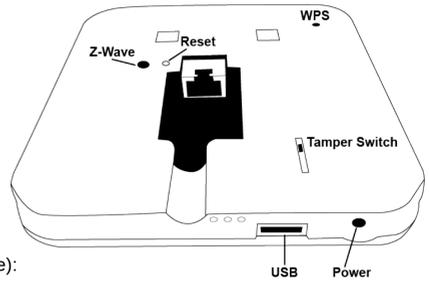
The HUB provides 4 buttons on the backside of the enclosure:

- **Tamper:** Automatically activated when the HUB is removed from the mounting base
- **Z-Wave:**
  - Single click turns the HUB into Z-Wave Inclusion Mode (white LED blink)
  - Long press starts Z-Wave Exclusion Mode (white LED blinks fast).
    Repeating the action stops the modes.
- **Reset:** Hold down the reset button when powering up the HUB. This turns the device back into factory defaults and resets all passwords and settings.
- **WPS:** WPS function of WIFI

Support for EnOcean Devices

In order to use EnOcean devices please plugin the Popp EnOcean Stick (POPE12204) into the USB Port. Start the user interface, open ➲*Configuration* ➲*Apps* and activate the EnOcean App. Now you can add and use EnOcean devices by using ➲*Configuration* ➲*Devices*. Please note that EnOcean devices are not self-describing but need to be identified before pairing. Identifying the wrong device will result in malfunction. Not all EnOcean devices are supported at the moment. Please find a list of supported devices on www.popp.eu/enocean.

Mobile Access

For controlling your smart home via mobile device you can download the Popp HUB App:

Z-Way

The Popp HUB is powered by Z-Way, the famous Z-Wave control software of Z-Wave.Me that is also powering famous projects such as Razberry (razberry.zwave.me). This means that all apps, workarounds, tricks and HowTos provided and describes for the Razberry project – e.g. on http://forum.z-wave.me/ – can be used and applied for the Popp HUB too.

Technical Data

MCU	MT7620, OS
OS	MT OpenWRT
Z-Wave Chip	Sigma Designs SD3503
Frequency	865…869 MHz, configurable according to country spec.
Flash	16 MB onboard plus 4 GB SD Card already included
External Power Supply	5V, 1A
Connectivity	10/100MB Ethernet plus WIFI b/g/n

Support

Should you encounter any problem, please give us an opportunity to address it before returning this product. Most questions regarding Z-Wave wireless communication standard can be answered through the international community at www.z-wave.info.

If your question can't be answered there, please use www.popp.eu/support or contact us by email: info@popp.eu

$C \epsilon$ ⌧

The complete CE declaration can be found on: www.popp.eu/ce
All questions regarding this declaration of conformity can be directed to the following address:
Popp & Co., 27 Old Gloucester Street, London, WC1N 3AX, UK

Phone: +44 (0) 20 7419 5726
eMail: info@popp.eu
Web: www.popp.eu