



PAIROT

Manual

Version 2.1 – September 2020

© 2020 xxter bv. All rights reserved.

Apple, iPad, iPad Air, iPhone, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. HomeKit is a trademark of Apple Inc.

Alexa and Amazon Echo are trademarks of Amazon.com, Inc.

Google Home is a trademark of Google LLC.

Screenshots in this manual and the actual screens on your computer can be different. Updates are made to the website and the products on a regular basis.

More information can be found at www.xxter.com/pairot

Contents

1. Registration	5
2. Configuring KNX components	6
3. Connecting the device	7
4. Set-up with the iOS Pairot app	8
5. Pairing with HomeKit	9
6. Set-up without app	10
7. Download configuration without app	11
8. Pairing with Alexa or Google Home	12
9. Updating firmware	13
10. Reset options and status LEDs	14
11. Service and support	15
Addendum A (component types)	15

Welcome

With Pairot, from xxter, you can control the KNX installation of a home with HomeKit, Alexa and/or Google Home. Pairot should not be used in commercial or public spaces.

This manual explains the configuration and initialization for the installation professional, as well as the pairing of the Pairot with HomeKit, Alexa and Google Home for the end-user.

The manual expects the installation professional, who has knowledge of the KNX home automation protocol, to be responsible for the KNX installation.

More information on the use of HomeKit, Alexa and Google Home can be found on the Apple, Amazon and Google website respectively.

For more information, please visit www.xxter.com/pairot.

1. Registration

The Pairot product has to be registered before use. After registration, the installation professional can configure the Pairot and the end-user can pair the device with HomeKit, Alexa or Google Home.

For the registration of the Pairot, please follow the registration help on: <http://www.xxter.com/register>

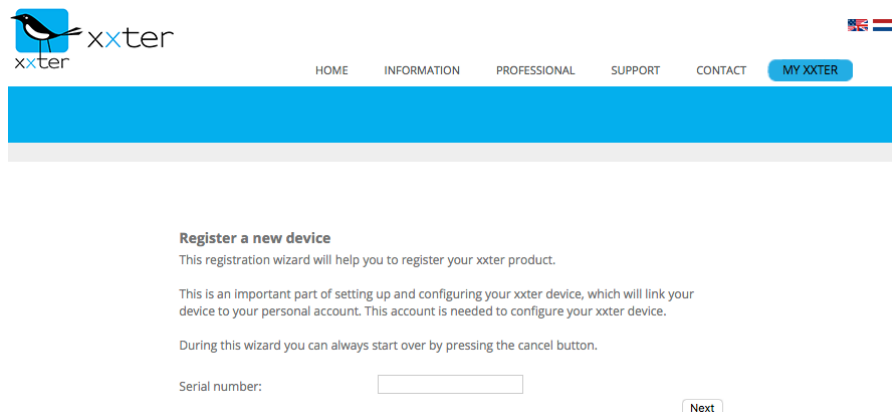
The image shows a web browser displaying the registration page for 'xxter'. The header features the 'xxter' logo on the left, which includes a stylized bird icon. To the right of the logo are navigation links: 'HOME', 'INFORMATION', 'PROFESSIONAL', 'SUPPORT', 'CONTACT', and a blue button labeled 'MY XXTER'. A blue horizontal bar spans the width of the page below the navigation links. The main content area has a light gray background. It begins with the heading 'Register a new device' in bold. Below this, there are three paragraphs of text explaining the registration process. The first paragraph states that the wizard will help register the product. The second paragraph explains that this is an important part of setting up the device and linking it to a personal account. The third paragraph mentions that users can start over by pressing the cancel button. Below the text, there is a label 'Serial number:' followed by a text input field. To the right of the input field is a button labeled 'Next'.

Image 1: Registration help

Please remember the usernames and passwords well, because they are needed for the rest of the installation.

The serial number of the device can be found on the device itself and on the packaging.

The end-user registration can also be performed during set-up with the Pairot app for iOS.

2. Configuring KNX components

A project consists of components. Every component has a type, a name and group addresses to identify the component. The type of the component has to correspond with the characteristics of the home-automation component that is used. For an overview and explanation of the different component types, see addendum A.

The name of a component is important for identification by the end-user, so he or she understands which component was intended, for instance 'Kitchen table ceiling light'. Components can also be grouped. These groups are used in HomeKit for the zones and room assignment.

For the technical identification of the component, group addresses are used:

- The sending group contains a maximum of 1 group address to which a telegram should be sent.
- The status group(s) contains one or more group addresses to display the status of that component. Often the sending group address is also a status group.

For the configuration of Pairot, the KNX group addresses will have to be transferred into the project. The easiest way to do this, is by exporting the KNX configuration in ETS as a 'KNXproj' extraction and import it in the project in my xxter, <http://www.xxter.com/myxxter>. Here you can easily transfer the relevant components from the ETS configuration to the Pairot configuration.

The screenshot displays the 'Import KNXproj file' dialog in the Pairot configuration software. On the left, a tree view under 'Groupaddresses' shows a hierarchy: '0 - Licht bel etage' (expanded), '1 - Licht 1ste etage', '2 - Sturingen', '3 - Centraal' (selected), '3/0 - Centraal', '3/1 - Scenes', '6 - ttt', '13 - 13', and '14 - data'. A 'Filter' box is next to the tree. The right panel contains configuration options: 'Selected:' is '3 - Centraal'; 'Name:' is 'Sub-group name'; 'Send:' is '3/*'; 'Status:' is '*depending on group*'; there is an unchecked checkbox for 'Add additional status group'; a radio button for 'No group' is selected, with other options being 'Group by main and middle groups', 'Group by building plan', and 'Group manually'; 'Group name:' has an empty text field; 'Allow in scenarios and schedulers:' has a checked checkbox; 'Add as:' is set to 'Switch contact' with a dropdown arrow; and an 'Add' button is at the bottom.

Image 2: Example of Pairot configuration

3. Connecting the device

The Pairot has to be connected with the UTP cable to the (internal) network. The Pairot should be able to connect to the Internet to be able to download the configuration and for future firmware updates.

Connect the bus cable to the black and red KNX connector. Subsequently connect the power adaptor to the 5 VDC adaptor port or other power to the 5-36 VDC white yellow plug.

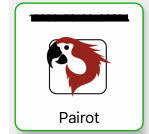


Image 3: Pairot device

4. Set-up with the iOS Pairot app

The set-up of Pairot can be done with the Pairot app for iOS. In case you do not have an iPhone or iPad, you can also set-up Pairot manually, see chapter 6 and 7.

Download the Pairot app from the Apple App Store and open the app. The app will automatically detect the connected Pairot device and will display it on a tile. It is required that the mobile device and the Pairot device are both connected to the same (local) network.



Tap the tile of your Pairot. If necessary, you will be guided through the end-user registration process. In case you have already registered, use the corresponding login information to set-up the device. As a last step of the set-up, the supported functions will be loaded on the devices and displayed.

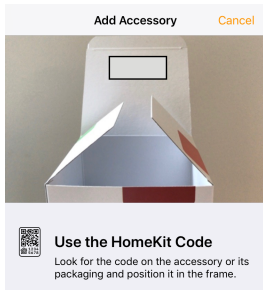
Note: every time changes are made to the project (see chapter 2), the supported functions need to be loaded with the Pairot app to make them available.

You can configure optional items under *Settings*, like *Network settings*, to change the IP-information, and *Protocols*, where you can for instance activate support for Amazon Alexa and the Google Assistant (these are turned off by default). In the menu option *Other* you can reset the Pairot to the factory defaults, logout from the device, or change the end-user password.

To set-up HomeKit, see chapter 5.

5. Pairing with HomeKit

The easiest way to connect the Pairot to Apple HomeKit, is with the Pairot app. This will allow you to load all the components at once, including the room assignment, based on the project (see chapter 2). Open the Pairot app on your tablet or smartphone, choose *HomeKit setup* and then *Add Pairot to home*. Here you can select an existing home from HomeKit or add a new one.



After you have selected a home, you will see the scanner for the unique HomeKit code of your device. You can find this code on the sticker on the device or on the sticker on the inside of the packaging.

If you are unable to scan the code, you can also enter the code manually.

Image 4: Apple HomeKit

When the pairing is successful, all components are added to the home, with the room assignment based on the grouping of the project (see chapter 2).

In case new components are added to Pairot in a later stage with *Load configuration* in the Pairot app, the Home app will automatically detect this and add them to the home. By choosing *Transfer predefined room layout* in the *HomeKit setup* menu, you can (re)assert the room assignment of the components from the groups in the project, either for all components, or only those that are newly added.

It is also possible to add the Pairot directly in the HomeKit app as an accessory, but this will require you to assign every component to a room manually.

Controlling this HomeKit-enabled accessory automatically and away from home requires an Apple TV with tvOS 10.x or later or an iPad with iOS 10.x or later set up as a home hub.

6. Set-up without app

In case you do not have an iOS device and the Pairot app, you can also perform the set-up on the Pairot device itself. Access the device on the local network with your web browser using the IP address it has received. When the device has started successfully and was able to connect to the Internet, you can find the IP address under the link to local settings on *My xxter* at the devices page.

Normally xxter will automatically receive an IP-address through DHCP. You can look up the IP-address that was given out on the DHCP-server or router, after the xxter device has fully started.

In case the Pairot could not reach a DHCP server, it will assume it is a 'zeroconf' network. In such a network, the Pairot should be accessible in the browser through <http://pairot.local>.

To continue the set-up, follow the Pairot configuration help:

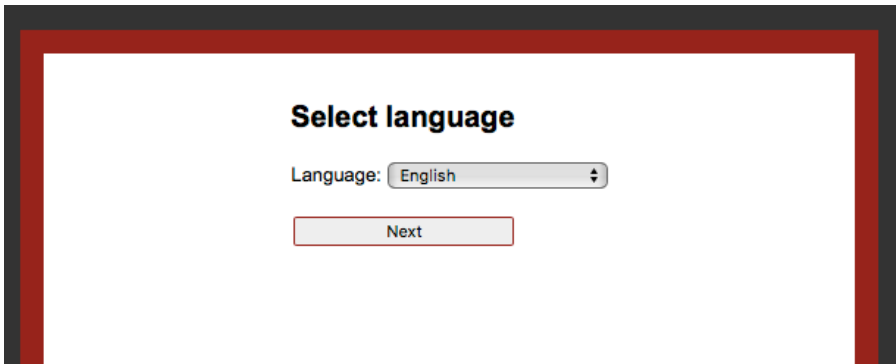


Image 5: configuration help

After the basic settings are completed, the KNX specific settings need to be set. On the Pairot device, open the *Settings – Protocols* page.

In case the Pairot device is directly connected to the KNX bus, the KNX protocol should be enabled with the connection method set to 'Direct'. Verify whether the KNX physical address is not used on the KNX bus by another component. We advise you to reserve this address in ETS as a dummy component, to prevent the address to be used by another KNX device in the future.

In case the Pairot device is connected through IP to another KNX gateway, there are two options. In case you are using the KNXnet tunnel protocol, enter the IP address of the KNX/IP module. In case you are using the KNXnet routing protocol, set this feature to "on" and verify the standard Multicast IP address.

When you open the *Status* page, you can verify whether KNX is connected correctly

On the *Settings – Protocols* page you can also select whether you want to be able to control the Pairot with Amazon Alexa and/or Google Home.

7. Download configuration without app

Now the installation and configuration is complete, it can be loaded onto the Pairot device. Access the device on the local network with your web browser using the IP address of the device and log in. Press the button *Load configuration* in the top left-hand corner of the menu.

After the configuration has been loaded successfully, the technical installation is complete. Now the Pairot can be paired with HomeKit, Alexa or Google Home.

Note: every time changes are made in the project (see chapter 2), these changes need to be downloaded on the Pairot device to make them available.

8. Pairing with Alexa or Google Home

In case you want to use Amazon Alexa or Google Home, make sure this is enabled on the *Settings – Protocols* menu of the Pairot app or on the Pairot device (see chapter 4 or 6).

To pair the Pairot with Amazon Alexa or Google Home, open the appropriate app on your tablet or smartphone. For Alexa the Pairot can be added as a Smarthome skill, for Google Home as a Service.



Login to link your pairot account

Username:

Password:

After you have chosen Pairot, you will be requested to log in. You can use your end-user login and password, which was created during registration (see chapter 1).

If applicable, you will be asked which Pairot you would like to pair.

After the pairing is successful, you can control all components that are configured on the Pairot device.

Image 6: Linking account

In the Alexa app, under *Smarthome, Devices*, you can find all available components. In case new components are added to Pairot in a later stage, you can use the *Discover* option in the Alexa app, to make these available for Alexa.

In the Google Home app you can find all paired components under *Home Control*. Newly added components will be automatically added to Google Home.

9. Updating firmware

Sometimes new versions of the xxter firmware will be released. These releases can add new features but can also contain bug fixes or improvements. On the xxter website the latest version of the firmware is listed.

The Pairot app will automatically detect when new firmware is available. This will be shown with a red arrow on the tile of the device. Select the device and tap the bottom option *Update available* to update to the latest firmware version and restart the device.



You can also verify manually on the Pairot whether new firmware is available. Access the device on the local network with your web browser using the IP address of the xxter device. You can find this IP address on the devices page of *My xxter*. Log in and open the *Settings – system* page and in the *Firmware* section press the *Check* button to check for firmware updates. In case a new version is available, you will be prompted to update the firmware.

By selecting *update firmware*, the device will download and install the new firmware. This can take some time. After the firmware is successfully updated, the device needs to be restarted. This can be done by clicking *Reboot*.

Important: never turn off the Pairot device while it is updating the firmware!

After updating the firmware, we always advise to reload the configuration by pressing the button *Load configuration*, either under the *Supported functions* options in the app or on the firmware in the top left-hand corner of the menu.

10. Reset options and status LEDs

In case of any problems, the Pairot device can be reset in several different ways, see also image 7:

R1	Hold during boot	Reset to factory defaults
R1	Press shortly	Full restart
R1	Press long (longer then 3 sec.)	Reset to factory defaults
R2	Press shortly	Reset application (soft restart)

When the Pairot device is connected to power, the system status can be seen using the LED indicators:

OK	green slow flashing	Currently booting or shutting down
OK	green continuous	Application started and ready for use
NETWORK	green slow flashing	Normal operation - OK
NETWORK	yellow slow flashing	No connection to KNX
NETWORK	red quick flashing	LAN problem, no network
NETWORK	red / green intermittent	No Internet connection, only LAN connection*
BOTH	quick red / green intermittent	Updating device

*) the Internet connection is only verified during boot and when the *Check Internet connection* button is pressed on the status page of the device.



Image 7: Pairot device

11. Service and support

In case of problems or questions, please always contact the installation professional of your KNX installation first.

Answers to frequently asked questions can be found on:

<http://www.xxter.com/faq>

On our forum you can exchange information with other users:

<http://www.xxter.com/forum>

Additional support can be found on:

<http://www.xxter.com/support>

In case you are unable to resolve the issue here, you can contact us on support@xxter.com. Please always include the serial number of the device it concerns.

Addendum A (component types)

In this addendum we supply a short explanation for the project configuration of the supported components.

Switch contact refers to a relay or switch actor and can only be turned on or off.

Dimmer refers to a dimming actor and can be set to a scale of 0 to 100%, but also as a switch contact that can be turned on or off. Optionally, the colour temperature can also be set.

Blind refers to a blind, awning, shutter or curtain. This has several options:

- Position or up/down control
- Start/stop motion
- Horizontal or vertical tilt (optional)

Temperature is a sensor value for the current temperature, only has status addresses.

Light intensity (only for HomeKit) is a sensor value for the current light intensity, only has status addresses.

Humidity (HomeKit and Google Home) is a sensor value for the current humidity, only has status addresses.

Occupancy sensor (only for HomeKit) detects whether someone is present, can be used in HomeKit to control other components.

Motion sensor (only for HomeKit) detects movement, can be used in HomeKit to control other components.

Thermostat has different display and setting options:

- Current temperature (only status addresses)
- Set point temperature (preferred temperature)
- Shift (optional, temperature shift in 0.5 degrees)
- Heating active (heating status, opt.)
- Cooling active (cooling status, opt.)
- Heating on/off (activate heating mode, opt.)
- Cooling on/off (activate cooling mode, opt.)
- Thermostat on/off (enable/disable thermostat)
- HVAC control mode (optional for air conditioning)
- Humidity (humidity status, if applicable)

* *Note: increasing or decreasing the set temperature will use the current actual temperature as a reference, not the set point temperature.*

Push button refers to a manual switch in the automated home that can be controlled and can be used in HomeKit to control other components.

RGB light refers to an RGB actuator to control color lighting, optionally with on/off switch and/or white control.

Stateless button (only for HomeKit) refers to a stateless switch in the automated home that can be controlled, which can be used in HomeKit to control other components.

Contact sensor (HomeKit and Google Home) is a contact sensor in the automated home that detects whether a door or window is opened or closed.

Smoke sensor (HomeKit and Google Home) is a smoke detector in the automated home.

Leak sensor (HomeKit and Google Home) is a leak detector in the automated home.

CO sensor (HomeKit and Google Home) is a carbon monoxide detector in the automated home, that gives an alarm when a predefined value is reached and optionally provides the actual measured value and peak measured value.

CO2 sensor (only for HomeKit) is a carbon dioxide detector in the automated home, that gives an alarm when a predefined value is reached and optionally provides the actual measured value and peak measured value.

Scene button refers to a virtual switch, that can be used to control existing KNX scenarios.

Valve (HomeKit and Google Home) refers to a valve actuator, with which a faucet can be opened or closed, optionally with a timer. For display purposes there are different types available, for instance for irrigation.

Fan (beta) refers to a fan control, with options for on/off, speed and swing/oscillate.

Technical specifications

Size (lxwxh):	90x72x60mm
Type:	DIN-module (4 MW)
Weight:	100 grams
Voltage:	5-36 VDC
Power consumption:	1W (avg.)
Cooling:	passive
Storage temp:	-40°C to 85°C
Environment temp:	0 °C to 70 °C
Humidity:	0-90% non-condensing
Protection level:	IP20
Fire resistance:	UL94-V0 (housing)

Accessories:

- UTP cable (1 m)
- Installation leaflet

Communication between iPhone, iPad
or iPod touch and the HomeKit-enabled
Pairot is secured by HomeKit technology.

Use of the Works with Apple HomeKit logo means that an electronic accessory has been designed to connect specifically to iPod touch, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.