WeR@Home™

Z-Wave® User Guide

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1. Z-Wave and WeR@Home™

Z-Wave allows you to convert your home into a Smart Home by giving you the ability to control and monitor your household devices. WeR@Home™ is a security-enabled product that can use encrypted Z-Wave messages to communicate with other security-enabled Z-Wave products, such as a Z-Wave door lock. WeR@Home™ integrated with Z-Wave provides you with the tools to remotely manage your devices using a mobile app.

Z-Wave is a wireless technology designed for home automation. The core of Z-Wave technology is **interoperability**, enabling the integration of devices from multiple manufacturers within your WeR@Home™ network, to enhance your Smart Home experience.

When you connect the Z-Wave Extender to your WeR@Home™ hub, your WeR@Home™ becomes a Smart Home network that can support the following Z-Wave device types:

- ■ Door locks
- ■ On/Off switches
- ■ Dimmers
- ■ Thermostats

> NOTE: For best results, ensure your Z-Wave device is supported by WeR@Home™. Contact your service provider for a list of supported devices.

WeR@Home™ Smart Rules allow you to control the Z-Wave devices by triggering them to perform specific actions, at specific times, in specific situations.

Z-Wave devices connected to an AC-power source extend the range of your WeR@Home™ network by acting as repeaters and passing information from one to the other.

For example, by using a Z-Wave device with repeater capability, information passed to a Z-Wave door lock can be successfully delivered even if the door lock is out of the Z-Wave Extender range.
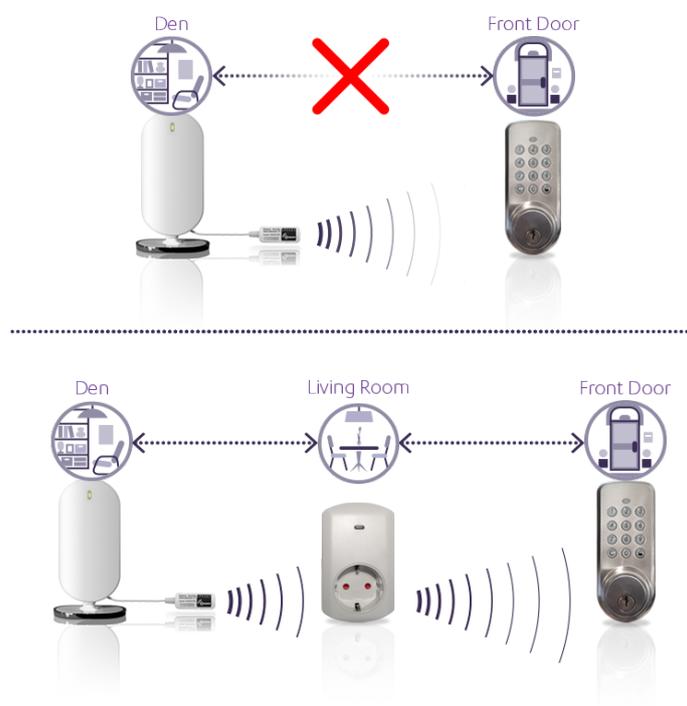
Figure 1 – Repeaters Extend the Network Range

2. Building Your WeR@Home™ Z-Wave Network

Before building your WeR@Home™ Z-Wave network, you must ensure that you have the following:

- An operational WeR@Home™ hub
- The Essence Z-Wave Extender
- At least one Z-Wave device

Figure 2 – Essence Z-Wave Extender

2.1. Installing the Z-Wave Extender

Install the Z-Wave Extender on the WeR@Home™ hub before you can use any Z-Wave devices in WeR@Home™. During this installation, a power failure event is logged and a notification is expected.

To install the Z-Wave Extender:

1. Unplug the power adapter cube from the electric power (mains) socket.

2. Disconnect the power cord from the hub's mini-USB socket.	3. Plug the Z-Wave Extender mini-USB connector into the hub's mini-USB socket.	4. Plug the power adapter cord into the Z-Wave Extender mini-USB socket.

> ⚠️ Caution: The hub mini-USB socket is for the WeR@Home™ power cord or the Z-Wave Extender only. Do not connect other equipment.

5. Plug the power adapter cube into the mains socket.

    Within a few minutes, the hub front panel LED turns green, showing that the hub is operational. The Z-Wave Extender is activated automatically.

    For information about the power adapter requirements, refer to Table 2 Z-Wave Extender Technical Specifications on page 21.

6. In the app **Devices** screen, check that the Z-Wave Extender appears in the **Devices** list:

    a. Login to your WeR@Home™ app.

    b. Tap ☰. The main menu appears.

    c. Tap **DEVICES**. The **Devices** screen appears.

    d. Verify that your Z-Wave Extender appears in the **Devices** list.

> 📝 NOTE: The Z-Wave Extender is powered only by the hub's power adapter. If there is a power outage, the hub's backup battery provides power to the hub but not to the Z-Wave Extender.

2.2. Adding Your First Z-Wave Device

After you install a Z-Wave Extender, you can add a Z-Wave device to WeR@Home™. Install the device within 20 m (65.6 ft.) of the Z-Wave Extender. Use Z-Wave devices with repeater capabilities to extend network range.

Before you begin, refer to the device's documentation to learn the pairing process for the specific device.

To add a Z-Wave device:

1. Log in to the WeR@Home™ app.

2. Tap ☰. The main menu appears.

3. Tap **DEVICES**. The **Devices** screen appears.

4. Tap [Add new device] . The **Add New Devices** screen appears displaying a list of the available device types including the Z-Wave device types.
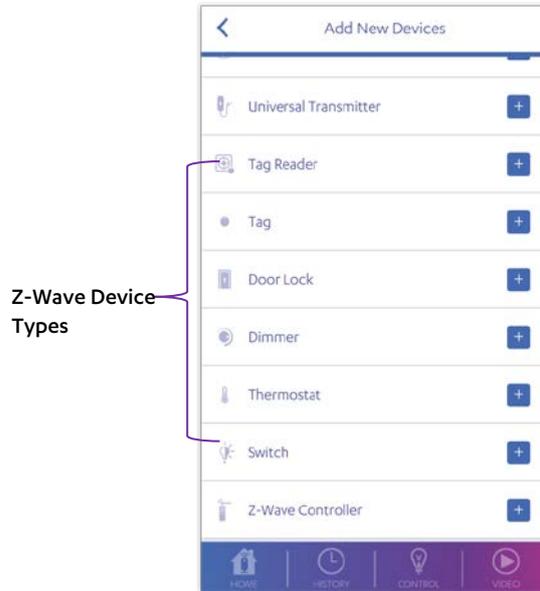
Z-Wave Device Types

Figure 3 – Selecting a Z-Wave Device Type

5. Select the type of Z-Wave device to be added. The **Power your device** window appears.

6. Position the Z-Wave device within 0.5 m (1.6 ft.) of the Z-Wave Extender.

7. Insert batteries into the device or connect to the nearest power outlet. The **Step 1 of 2** pairing screen appears.

Figure 4 – Pairing Process: Step 1 of 2

8. Press the pairing button or switch on the Z-Wave device, according to the device's documentation. The **Step 2 of 2** pairing screen appears.

Figure 5 – Pairing Process: Step 2 of 2

9. Press the pairing button again. When the pairing process is complete, a window appears prompting you to enter a name for the device.

10. Enter a unique name and/or location for the device.

11. Tap **Done**.

12. Place the device where you want.

13. If the Z-Wave device location is not where the Z-Wave device was paired, update your Z-Wave network. Refer to 6.1 on page 18.

To adjust your Z-Wave device settings after pairing, refer to section 5.2 on page 13.

3. Adding and Removing a Third-party Controller

To expand your WeR@Home™ Z-Wave network, you can add third-party Z-Wave controllers WeR@Home™. For example, a third-party Z-Wave controller can be a repeater whose range can extend the total range of your WeR@Home™ network. In your extended WeR@Home™ network, the Essence Z-Wave Extender acts as the primary Z-Wave controller while the third party Z-Wave controllers are secondary.

To add a third-party Z-Wave controller, follow section 2.2 on page 6, and select **Z-Wave Controller** as your device.

To remove a third-party Z-Wave controller, follow section 5.4 on page 14, and tap 🔴 for the controller that you want to remove.

Devices originally connected to the third-party Z-Wave controller must be re-learned on the third-party Z-Wave controller. Follow the instructions for pairing devices in the third-party Z-Wave controller user manual.

> NOTE: The Essence Z-Wave Extender and mobile app cannot access or control devices connected to a third-party Z-Wave controller.

Depending on its capabilities, a third party Z-Wave controller may have access to and control of all Z-Wave devices connected to the Essence Z-Wave Extender. For example, you can use a third party Z-Wave remote control for the switches and dimmers connected to the Essence Z-Wave Extender.

4. Joining an Existing Z-Wave Network

If you have an existing third-party Z-Wave network, WeR@Home™ can join the network. WeR@Home™ enters "learn" mode on the existing network to automatically copy the existing network's Smart Home network structure. When you join a Z-Wave network, you have access to the Z-Wave devices supported by WeR@Home™. The Z-Wave Extender is assigned one of the following roles depending on the third-party controller capabilities:

- **Secondary (inclusion)** - allowed to add or delete additional Z-Wave devices
- **Secondary** –not allowed to add or delete additional Z-Wave devices

To join an existing third-party Z-Wave network:

1. Remove all Z-Wave devices from your WeR@Home™, except for your Z-Wave Extender. Refer to section 5.4 on page 14.

2. In the WeR@Home™ app, tap ☰. The main menu appears.

3. Tap **Devices**. The **Devices** screen appears.

4. Tap ⚙ for your Z-Wave Extender. The **Z-Wave Controller** configuration screen appears.

5. Tap **Join Existing Network**. WeR@Home™ copies the topology of the existing network and prompts you to enter the name for the existing network controller.

6. Enter the name for the existing network controller and tap **OK**.

4.1. Changing Z-Wave Extender Role

If your Z-Wave Extender role is not **Secondary (inclusion)** and you want to allow your Z-Wave Extender to add or delete additional Z-Wave devices, you can change your Z-Wave Extender role to **Primary.**

⚠ Caution: If you change your Z-Wave Extender role to **Primary**, you cannot remove your Z-Wave Extender (or WeR@Home) from the existing third-party network.

To change the role of your Z-Wave Extender:

1. In the WeR@Home™ app, tap ☰. The main menu appears.

2. Tap **Devices**. The **Devices** screen appears.

3. Tap ⚙ for your Z-Wave Extender. The **Z-Wave Controller** configuration screen appears.

4. Tap **Role**.

5. Tap **primary**. A ✔ appears confirming your choice.

4.2. Removing Z-Wave Extender from Existing Network

If your Z-Wave Extender role is **Secondary or Secondary (inclusion),** you can remove your
Z-Wave Extender from the existing third-party network.

⚠ Caution: Removing the Z-Wave Extender from the existing network, removes
connection to all Z-Wave devices from the Z-Wave Extender.

To remove your Z-Wave Extender from the existing network:

1. In the WeR@Home™ app, tap ☰. The main menu appears.

2. Tap **Devices**. The **Devices** screen appears.

3. Tap ⚙ for your Z-Wave Extender. The **Z-Wave Controller** configuration screen appears.

4. Tap **Exclude Network**. A confirmation appears.

5. Tap **OK**. The third-party controller and its devices are removed.

5. Managing Your Z-Wave Devices

Following the installation and activation of the Z-Wave Extender, you can:

- Add additional Z-Wave devices
- Control Z-Wave devices
- Define Smart Rules for Z-Wave devices
- Remove Z-Wave devices

5.1. Adding Additional Z-Wave Devices

You can add up to 232 additional Z-Wave devices to WeR@Home™. Refer to 2.2 on page 6.

> NOTE: Essence recommends updating your Z-Wave network after adding additional Z-Wave devices. Refer to 6.1 on page 18.

5.2. Controlling Z-Wave Devices

You can control Z-Wave devices **remotely** using WeR@Home™.

For example:

- Dim your home lighting to 25%.
- Turn on or off a household appliance like a coffee machine.
- Set a thermostat to the desired temperature.
- Unlock the main entrance door lock for a scheduled arrival.

To control a Z-Wave device:

1. Tap [CONTROL]. The **Control** screen appears.
2. Tap the device you want to control.

NOTE: You can define a shortcut to a Z-Wave device in the **Control** screen to replace steps 1 and 2.

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3. Adjust the settings of the Z-Wave device. The screen may vary based on your device. The changes may take several seconds.

NOTE: A Z-Wave device with **power-save mode** takes longer to respond. Power-save mode enables a battery-powered Z-Wave device to reduce power consumption.

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4. Tap < to return to the **Control** screen.

5.3. Defining Smart Rules Using Z-Wave Devices

Use Smart Rules to set up WeR@Home™ to automatically perform specific actions that follow specific triggers. For example, you can create a Smart Rule to turn on the entrance hallway light using a Z-Wave switch and set the temperature to 25° using a Z-Wave thermostat, when the front door is opened after 17:00.

For more information, refer to the Smart Rules section in the ESUGSL018 WeR@Home™ User Guide.

5.4. Removing a Z-Wave Device

You can remove a Z-Wave device from WeR@Home™ if the device is not needed, becomes unresponsive, or becomes disconnected from the network.

NOTE: When you remove a Z-Wave device, any rules defined for the device may not work correctly.

To remove a Z-Wave device:

1. Log in to the WeR@Home™ app.

2. Tap ☰. The main menu appears.

3. Tap **DEVICES**. The **Devices** screen appears.

4. Tap **DELETE** in the top right-hand corner of the screen.

5. Tap ⊖ for the device that you want to remove. The **Remove Z-Wave Device** window appears.

6. Press the pairing button on the Z-Wave device, according the device's documentation, and tap **OK** in the window.

7. Tap **OK** in the top right-hand corner of the screen.

> NOTE: Essence recommends updating your Z-Wave network after removing a Z-Wave device. Refer to 6.1 on page 18.

6. Troubleshooting

If you are having trouble with your WeR@Home™ Z-Wave network, see Table 1. If you need further assistance, consult your service provider.

Table 1: Troubleshooting Solutions

Problem	Solution
A Z-Wave device is unresponsive, such as not performing the actions defined for the device in the Smart Rules.	1. Press the device's pairing button. 2. Verify that the device responds to setting changes made using the **Control** module.
A Z-Wave device appears in the devices list with ⊘ **indicating that the device is out of range.**	1. Ensure that the batteries are charged. 2. Move the device to a different location with fewer obstacles between the Z-Wave Extender and the device. 3. Press the device's pairing button. 4. Verify that the device responds to setting changes made using the **Control** module.
A Z-Wave device disappears from the devices list.	1. Disconnect and then reconnect the power supply of the device. 2. Press the device's pairing button. 3. Verify that device responds to setting changes made using the **Control** module. 4. If the device is still not available, update the Z-Wave network. Refer to section 6.1 on page 18. 5. If the device is still not available, move the device to a different location with fewer obstacles between the Z-Wave Extender and the device. 6. Press the device's pairing button again. 7. Verify that device responds to setting changes made using the **Control** module.

Problem	Solution
An error message appears when pairing of a Z-Wave device ends unsuccessfully.	1. Check if the device is compatible with the Z-Wave Extender by comparing the frequency of the device with the frequency for the country where the Z-Wave Extender is located. Refer to Appendix A on page 21. If the frequency of the device is different, contact your service provider and replace the device. 2. Reference the pairing process instructions in the device's user manual and repeat the pairing process. 3. Unpair the device and then repeat the pairing process. Refer to section 6.3 on page 20. 4. Unpair all the Z-Wave devices and restore factory settings. Refer to section 6.2 on page 19.
A Z-Wave device does not respond to changes in its device settings.	Note: If the device supports power-save mode, the Z-wave device takes longer to respond. 1. Move the device to a different location with fewer obstacles between the Z-Wave Extender and the device. 2. Unpair the device and repeat the device pairing process. 3. Verify that the device responds to setting changes made using the **Control** module.
The Z-Wave Extender does not work or does not appear on the Devices and the Control device list.	1. Disconnect the Z-Wave Extender from the hub. 2. Make sure the hub LED is Green, indicating that the hub is on-line. 3. Reconnect the Z-Wave Extender to the hub.
Network Update is not successful. If at least one Z-Wave device is not responding, the Network Update is unsuccessful. The **Network Update** fails if any of the Z-Wave devices are in power-save mode or out of range of the Z-Wave Extender.	1. Using the **Control** module, verify that each device responds to setting changes. 2. For each device that does not respond: a. Unpair the device. b. Repeat the device pairing process. c. Verify the device responds to setting changes made using the **Control** module. 3. Update the Z-Wave network. Refer to section 6.1 on page 18.
Pairing a Z-Wave device fails for a device that was previously successfully paired with the same hub and the same Z-Wave Extender.	The device may be damaged or faulty. Contact your service provider to replace the device.
For a Z-Wave device with more than one function, some of the functionality does not work. For example, Z-Wave switches may have capabilities not currently supported in WeR@Home™, such as power metering.	Refer to the device's documentation.

The following are tools to resolve problems that can occur in the Z-Wave network:

- **Network Update**
- **Reset to Factory**
- **Unpair Z-Wave Devices**

6.1. Updating the Network

The **Network Update** tool remaps the Z-Wave network to reestablish communications between the Z-Wave devices.

Use the **Network Update** tool when:

- Adding additional Z-Wave devices to an existing Z-Wave network
- Removing Z-Wave devices from an existing Z-Wave network
- Resolving troubleshooting issues

NOTE: The **Network Update** fails if any of the Z-Wave devices are in power-save mode.

To update the network:

1. Tap ☰. The main menu appears.
2. Tap **Settings**. The **Settings** menu appears.
3. Tap **Z-Wave**. The **Z-Wave** screen appears.
4. Tap **Network Update**.

NOTE: During the **Network Update**, Z-Wave devices' responses may be delayed.

One of the following appears:

■ **Rediscovering Network Done –** Update is successful.

 - Update failed.

 - Update is partially successful.

Tap **MORE INFO**. A list of the devices that failed appears.

If the **Network Update** is not successful:

1. Verify that all the Z-Wave devices are not in power-save mode.

2. Ensure that all devices are in range of the Z-Wave extender or that there are enough repeater devices between each device and the extender.

3. Update the network.

6.2. Restoring Factory Settings

Restoring factory settings returns your Z-Wave Extender to its default settings and removes Z-Wave device definitions.

> NOTE: Use this procedure only when the network primary controller is missing or otherwise inoperable.

To restore factory settings:

1. Tap ☰. The main menu appears.

2. Tap **Settings**. The **Settings** menu appears.

3. Tap **Z-Wave**. The **Z-Wave** screen appears.

4. Tap **Reset to Factory**.

> NOTE: After restoring factory settings, you must unpair each of the Z-Wave devices.

6.3. Unpairing a Z-Wave Device

Unpair Z-Wave devices to help resolve some troubleshooting issues. Unpairing removes all controller connection definitions from a Z-Wave device.

To unpair a Z-Wave device:

1. Tap ☰. The main menu appears.

2. Tap **Settings**. The **Settings** menu appears.

3. Tap **Z-Wave**. The **Z-Wave** screen appears.

4. Tap **Unpair Z-Wave Devices** and tap **Yes**. A **Remove Z-Wave Device** window appears.

5. Press the pairing button on the Z-Wave device and tap **OK**. The Z-Wave device is unpaired but remains in the **Devices** list.

Appendix A   Z-Wave Extender Technical Specifications

The following table includes the technical specifications for the Z-Wave Extender.

Table 2: Z-Wave Extender Technical Specifications

Category	Specification Information
Supported Z-Wave Device Types	Binary switches: for example, ON/OFF devices
	Multiple-level switches: for example, dimmers
	Thermostats
	Door locks
Controller Capacity	The maximum capacity for a single Z-Wave Extender is up to 232 Z-Wave devices.
Communication	**Maximum RF Range**: 30 m (98 ft.) open air
	Z-Wave bi-directional radio protocol (onboard)
	Modulation and Frequency: GFSK Modulation ■ 868.42 MHz (Europe) ■ 908.4 MHz (USA, Canada, Mexico) ■ 916 MHz (Israel) ■ 921.42 MHz (Australia) ■ 869 MHz (Russia)
	Bit Rate: up to 100 kbps
Security	**Data Security**: 128-bit AES encryption
	Unique electronic serial number
Power	Powered only by the hub's power adapter **Note:** The **power adapter** should be either DEE VAN ENTERPRISE CO., LTD model DSA-6PFE-05 FEU 050100, providing up to 5VDC/1A or the equivalent. **Note:** In the event of a power outage, the Z-Wave Extender is not powered by the hub's backup battery.
Dimensions	**Size**: H: 5mm (0.2 in.), L: 58mm (2.28 in.), W: 24mm (0.94 in.) **Weight**: 10 grams (0.03 lbs.) **Cable Length**: 15cm (5.9 in.)
Environment	**Storage Ambient Temperature range**: -20°C – +50°C (-4°F – +122°F) **Operating Ambient Temperature range with battery**: 0°C – +50°C (32°F – +122°F) **RF Operating Humidity**: Up to 95% non-condensing
Compliance	**FCC**: YXG-ES800ZWP **IC**: 11061A-ES800ZWP

Appendix B   Z-Wave Plus Technical Specifications

Table 3 below lists the information required to operate a certified Z-Wave network.

Table 3: Z-Wave Plus Specifications

Specifications	Subject	Values		
SDK Version	Version number	6.61.00		
Association Groups	Number of groups	1		
	Group ID profile	General	AGI_PROFILE_GENERAL = 0x00	
	Group ID name	Lifeline	AGI_GENERAL_LIFELINE = 0x01	
	Associated group nodes	3		
	Lifeline Notification Reports	Notification Report: Device Reset Locally	Notification sent when device is reset to factory	
Basic Commands	WeR@Home does not support the basic command class. Basic commands received are ignored.			
Command Classes	Command Class	Version	Support	Control
	Application status	1	x	
	Association	2	x	x
	Association group information	1		x
	Basic	1		x
	Battery	1		x
	Binary Switch	1		x
	Configuration	2		x
	CRC16 Encapsulation	1	x	x
	Device reset locally	1	x	
	Door Lock	1		x
	Manufacturer specific	1	x	
	Multi-channel	4		x
	Multi-channel association	3		x
	Multi-level Switch	3		x
	Power level	1	x	
	Security	1	x	x
	Thermostat Fan Mode	3		x

Specifications	Subject	Values		
	Thermostat Fan State	1		x
	Thermostat Setpoint	2		x
	Version	2	x	
	Wake up	2		x
	Z-wave Plus information	2	x	

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For more information, please contact: Essence Security International (E.S.I.) Ltd.

12 Abba Eban Avenue,

Ackerstein Towers Bldg. D

Herzliya Pituach, 4612001 Israel

www.essence-grp.com

Tel: +972-73-2447777

Fax: +972-9-7729962