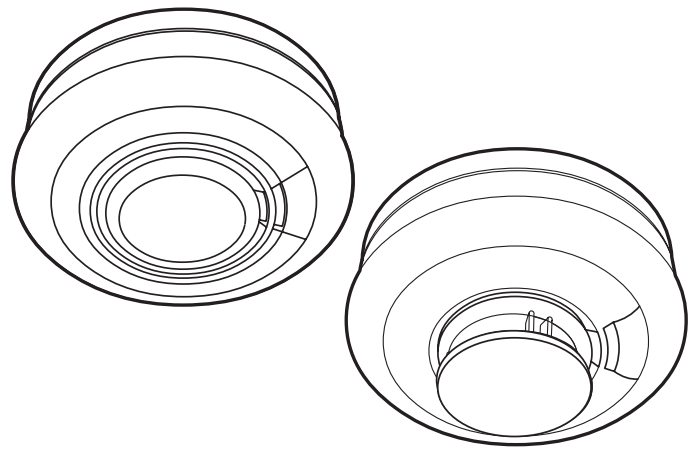


EiA600 Series Z-Wave Smoke Alarm



Quick Start

This device combines a Z-Wave compatible Smoke Alarm specifically designed to comply with North American standards and a Z-Wave Communication Module. Pressing the Inclusion Button (located on the Z-Wave Communication Module) for one second adds (includes) or removes (excludes) the device to/from the Z-Wave network.

Please refer to the chapters below for detailed information about all aspects of the product.

Model & Description:

Alarm Model	Description
EiA660RFZ	Z-Wave Smoke/Heat Alarm
EiA650RFZ	Z-Wave Smoke Alarm

Product description

This product combines a certified stand-alone Smoke or Combination Smoke/Heat Alarm with a plug-in Z-Wave module to form a wirelessly reporting Smoke or Smoke/Heat Alarm. This enables the unit to be wirelessly Linked to a third party Z-Wave Controller. When any of the Linked products are triggered by smoke or heat the unit will transmit messages to the main controller. As a FLiRS enabled device each Alarm will trigger all other Alarms provided they share the same association. The Smoke Alarm is certified by Underwriters Laboratories and satisfies all UL217 contemporary legal requirements and the Z-Wave module is certified by the Z-Wave Alliance.

This premium quality Smoke Alarm is monitored electronically and will report the following:

1. Alarm on sensing smoke (EiA650RFZ) / alarm on sensing smoke / heat (EiA660RFZ)
2. Battery status reporting
3. Sensor Fault
4. Alarm removal from mounting plate

The device is a secure Z-Wave Plus device and can be used in a wireless Z-Wave network. It supports secure communication only when the central controller also supports secure communication. Even if included securely the device is able to communicate unsecured with devices included unsecured using the association groups 2 and 3.

Quick Installation Guidelines

Please refer to the installation guide of the EiA600 Series Alarms for information about how and where the Smoke Alarm should be installed. Alarms should be installed as per NFPA72.

- The first step is to fix the mounting base in the desired location as per the installation guide for the Smoke Alarm.
- Next remove the battery isolation strip from the battery compartment to power the Alarm (see Figure 1).
- Include the Smoke Alarm into your existing Z-Wave based Smart Home Network by pressing the Inclusion button once (see Figure 2).
- The Green LED on the Z-Wave module will flash during the inclusion process.
- Once included place the Smoke Alarm on the mounting base and turn clockwise.

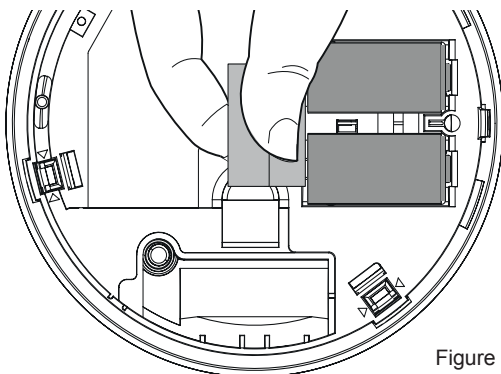


Figure 1

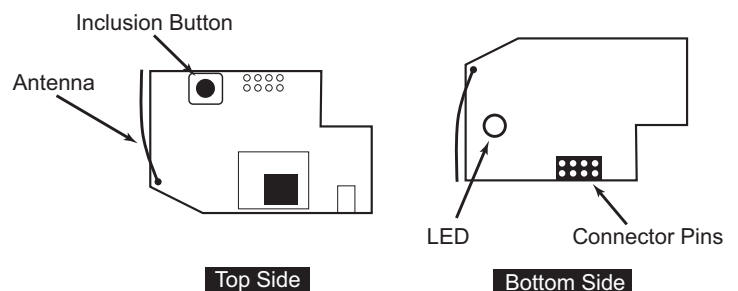


Figure 2

Module Removal & Installation

The Z-Wave module is pre-fitted. To remove the module, carefully use the pull tag to remove the module from the Alarm. To refit the module plug it into the base of the Alarm while being careful to align the connector pins and insert the flexible antenna into the antenna hole (See Fig 3). N.B. Ensure that the module is fully inserted.

The Z-Wave RF module will be pre-installed by the manufacturer. If the Z-Wave module is removed and fitted to another host Alarm, the label displaying the FCC ID: A5FEiA600ZW & ISED ID: 22380EiA600ZW must be placed on the new host Alarm, visible when installed (see Fig 4).

Adding to a Network (Inclusion)

Do not attempt to add your Z-Wave Alarm unless you are familiar with the operation of your Z-Wave Controller.

1. Read the instruction for your Z-Wave controller regarding adding new devices. Then initiate the inclusion function within your Z-Wave controller.
2. Pressing the button 'Inclusion Button' for one second includes the device with Security. (see Fig 2) The Green LED will flash.

If the button is pressed for at least 2.5 seconds the inclusion will be done without the (Security Command Class).

3. If the inclusion is not successful, restart from step 1.
4. Press the test button on the Alarm and check that the controller receives a notification.
5. Once the Alarm is included in the Z-Wave system you can define association groups via the Z-Wave controller. Please refer to your Controller manual for further details.

Removing from the Network (exclusion)

Single click the Button to start the removal process. The LED will blink a couple of times. *Note a device must be already added to the network.

Check-In Period:

As this is a FLiRS enabled device the check-in period is once a second and is not configurable.

Operating the device

In case smoke is detected by the Smoke Alarm the device will sound and the wireless module will issue a Z-Wave alarm command to the main controller and other associated devices. The wireless module will also report a low battery warning, Sensor or Chamber Fault as they occur. A tamper alarm will be reported when the Alarm is removed from the mounting plate.

Note: All communication of the wireless module is performed with application level security if the device was included securely and all communication partners support secure communication as well. In case a non-secure device is associated for switching on a Smoke Alarm, the Smoke Alarm will detect this and change its communication style with this very device to non-secure. This process happens one time and will take about 20 seconds. This delay will happen on first communication only.

Factory reset

To do a factory reset press the inclusion button for at least 10 seconds. After 5 Seconds the LED will start to blink and stop 5 seconds later. This procedure should only be used when the primary controller is inoperable.

Alarm Messages

The device will issue the following (unsolicited) alarm messages:

- **Smoke Detected** (this message will also be issued when the Test button is pressed)
- **Low Battery Alarm** (when the battery goes low)
- **Tamper Detected** (on, when the Smoke Alarm head is removed from the base)
- **Fault** (when the smoke or heat sensor is deemed to be faulty or smoke chamber is contaminated)

Interconnect Function

The Z-Wave modules has FLiRS enabled on it, this allows for each Alarm in the system to communicate to the other Alarms in the event of a fire, thus when one device senses smoke/heat it can communicate to the other Alarms to also sound their sirens.

This device employs FLiRs, please ensure your controller is set to exclude this device from polling. Failure to do this will result in excessive battery drain and extremely low battery life

Node Information Frame

The Node Information Frame is the business card of a Z-Wave device. It contains information about the device type and the technical capabilities. The inclusion and exclusion of the device is confirmed by sending out a Node Information Frame. Beside this it may be needed for certain network operations to send out a Node Information Frame.

A simple click on the 'Inclusion Button' sends a NIF.

Associations

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive a common wireless command. Please refer to your Z-Wave controller manual for further instructions.

Association Groups:

1	Lifeline (max. nodes in group: 10)
2	Alarm Reports (max. nodes in group: 10)
3	Switching Command when Alarm (max. nodes in group: 10)

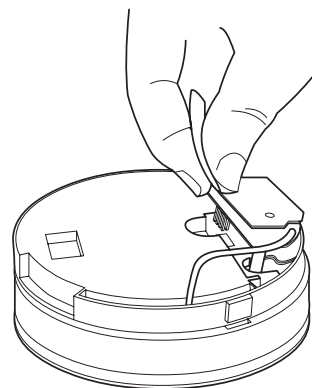


Figure 3

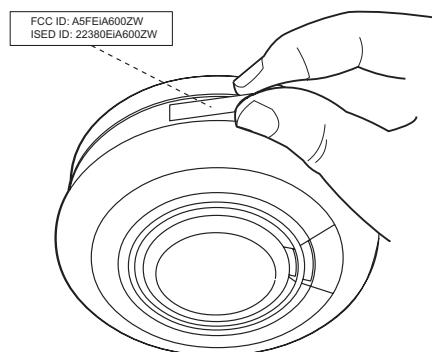


Figure 4

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion. As this is a life safety device we strongly recommend that you don't change the configuration parameters as this may effect the performance of the product.



Limitations of the Z-Wave System

1. The Z-Wave protocol is not a life safety protocol and should not be relied upon for life safety.
2. If your internet connection is lost, communication from your 3rd party controller (i.e. to cloud or mobile devices) may not be possible. Your Alarm will still continue to operate as a stand alone Alarm and does not rely on an internet connection to do so.

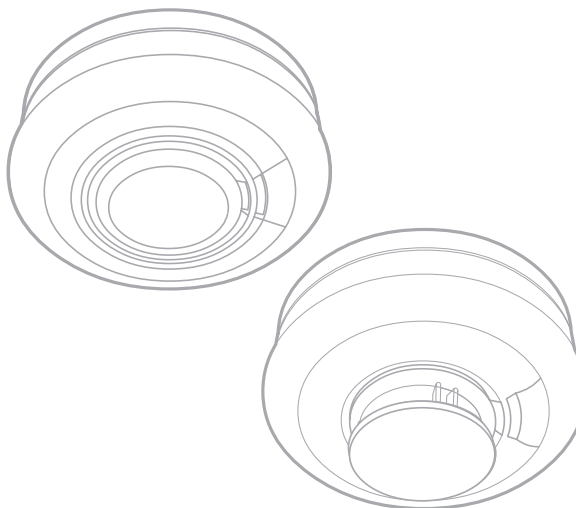
Command Classes

Supported Command Classes

- Basic (version 1)
- Binary Switch (version 1)
- Binary Sensor (version 2)
- Association Group Information (version 1)
- Device Reset Locally (version 1)
- Z-Wave Plus Information (version 2)
- Configuration (version 1)
- Alarm (version 5)
- Manufacturer Specific (version 2)
- Powerlevel (version 1)
- Battery (version 1)
- Association (version 2)
- Version (version 2)
- Wake-up (version 2)

Controlled Command Classes

- Basic (version 1)



Z-Wave Technical Data

Battery Type	Powered from Alarm Battery
Frequency	@ 908.42 MHz (SRD Frequency Band according FCC Part 15)
Wireless Range	up to 100m outdoor, 40m in buildings
Explorer Frame Support	Yes
SDK	6.51.6
Device Network Role	Reachable Sleeping Slave (RSS)
Device Type	Sensor
Routing	No
FLiRs	Yes

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

ISED

This device complies with ISED's license-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.



Please return to:

Customer Service

Ei Electronics US, Inc

2 Tunxis Road, Suite 209

Tariffville, Connecticut 0608

web: www.ei-electronics.com