

# ZE250-A-IN Quark IoT Gateway

## Quick Installation Guide



### Package Contents

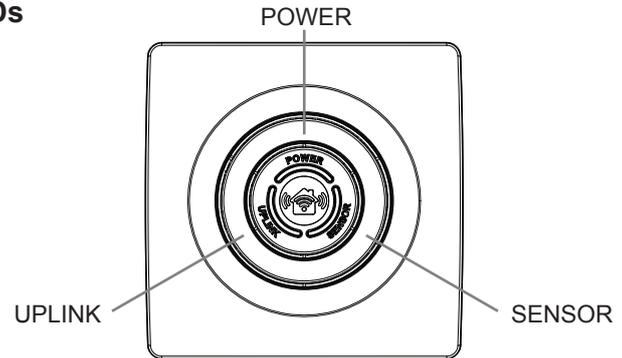
ZE250-A-IN Quark IoT Gateway  
Power Adapter  
Ethernet Cable  
Quick Installation Guide

### Installation

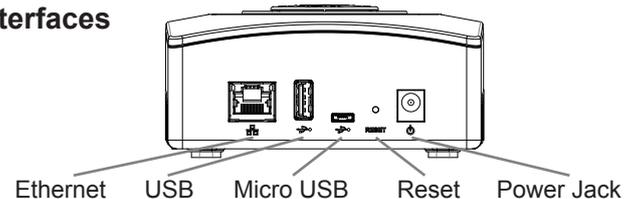
- ✓ Plug the adapter to AC plug
  - ✓ Connect the Power jack to the device
  - ✓ Power should be green and blink
- This means device is powered on and is booting up.  
Once the LED glows green continuously the device is ready.



### LEDs



### Interfaces



Input: 5V  $\overline{\text{=}}$  2A Operating temperature: 0°C~40°C

✓ **Register your device and download the SDK :**

<https://software.intel.com/en-us/form/smart-home-development-acceleration-platform-request>

✓ **For latest BSP image and documentation, please visit :**

<http://www.cybertan.com.tw:8080/download/downloadlist.jsp>

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# ZE250-A-IN Quark IoT Gateway

## Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

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.

### **IMPORTANT NOTE:**

#### **FCC RF Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with FCC multi-transmitter product procedures.

## Canadian IC Compliance

### **Industry Canada statement:**

This device complies with Industry Canada license-exempt RSS standard(s). 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. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with IC multi-transmitter product procedures. Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.

### **IMPORTANT NOTE:**

#### **IC Radiation Exposure Statement:**

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body. Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

## CE Compliance

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.



## **CyberTAN ZE250** Z-Wave Overview Guide

# Inclusion and Exclusion

Your CyberTAN ZE250 Controller can work with all Z-Wave devices, such as sensors, alarms, door locks, thermostats, etc. Over a thousand Z-Wave devices are available from many brands. (Z-Wave is a wireless communications system; check the package or specs to see if a device uses Z-Wave.) Before CyberTAN ZE250 can control a device, it must be included into the CyberTAN system.

CyberTAN **Custom Device Wizards** are available for select devices that pass stringent CyberTAN Labs testing for compatibility and quality. The Custom Device Wizards make Inclusion/Exclusion easiest, with specific details for each device.

A list of these devices is available and updated at <http://getvera.com/compatibility/>

For all other Z-Wave devices, a **Generic Device Wizard** is used for Inclusion/Exclusion. A Generic Device Wizard is available for each device category (thermostats, sensors, alarms, etc.)

To get started, after setting up your CyberTAN ZE250 Controller, use the CyberTAN UI to select **Devices** and then **Add Device** (Figures 1-1 & 1-2).

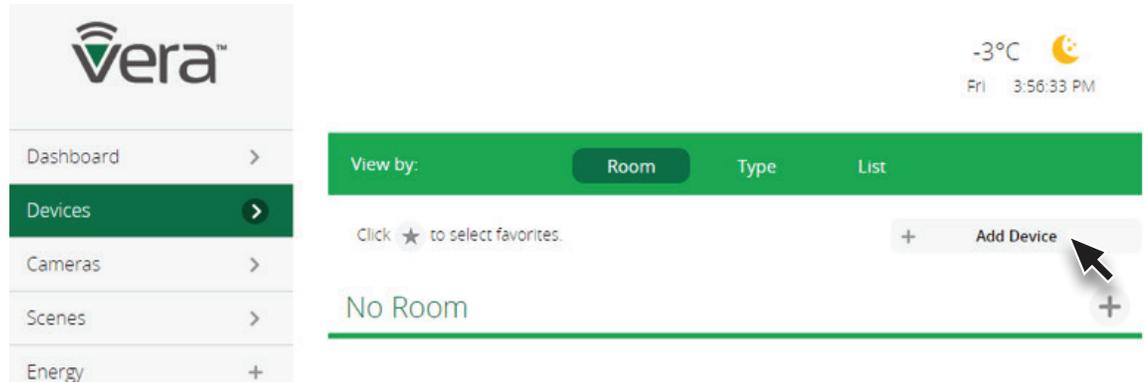


Figure 1-1: Add Device

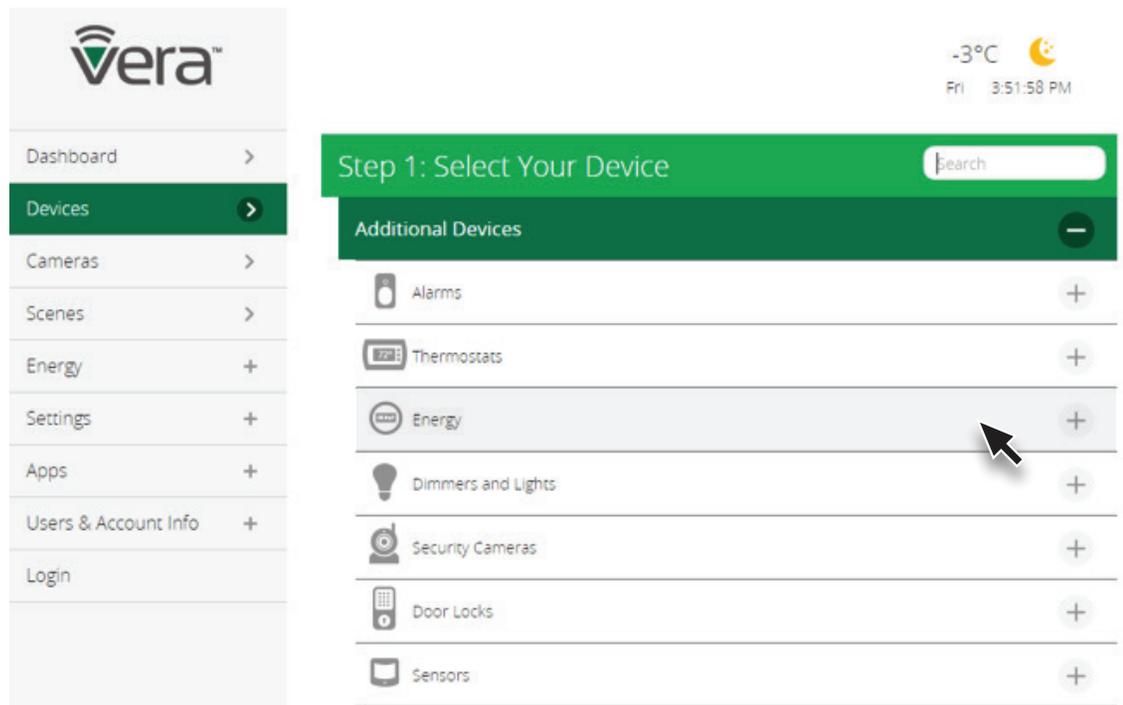
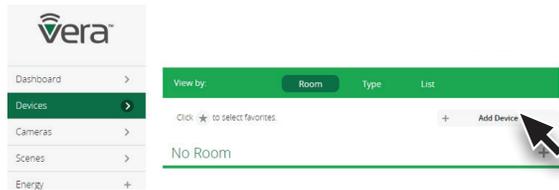


Figure 1-2: Device Paring menu

# Inclusion/Exclusion for Devices with CyberTAN Custom Device Wizard

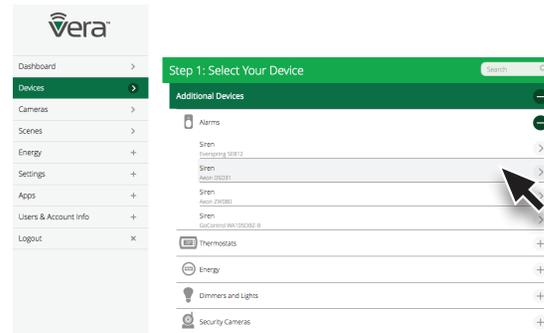
## Step 1

Select **Devices** and click on the **Add Device** option.



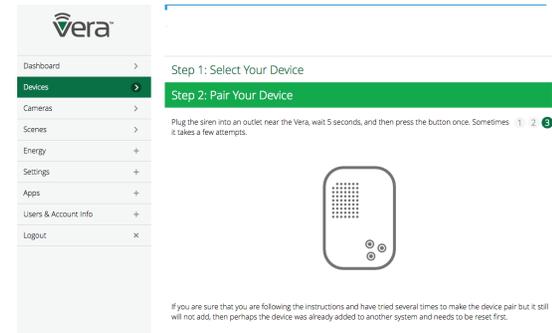
## Step 2

Click on the **+** sign for the device's category. A list of CyberTAN **Custom Device Wizards** is displayed. Select a device to include.



## Step 3

Follow the steps in the Device Wizard to add the device.



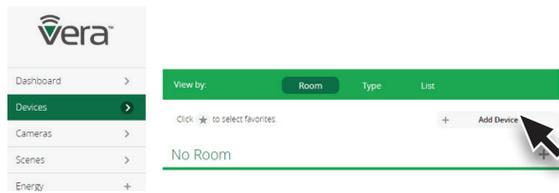
After adding a new device, the CyberTAN ZE250 Controller will ask you to name it and choose the room it is (or will be) located in.

**Note:** If the device was previously included with a different Z-Wave system, you'll need to exclude it before adding with your CyberTAN ZE250. (You may also need to do this if you have problems with Inclusion/Exclusion the first time.) Press the Retry button to start the exclusion process. Once the device is excluded, add it by following the inclusion steps.

# Inclusion/Exclusion for Devices using a Generic Device Wizard

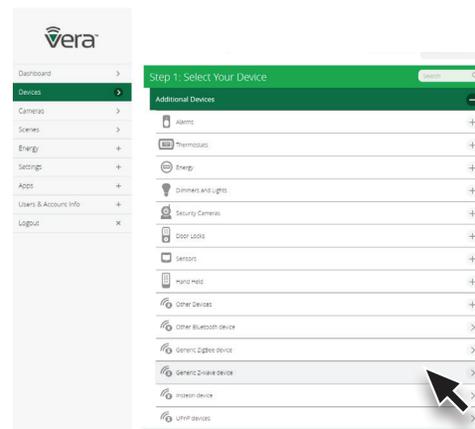
## Step 1

Select **Devices** and click on the **Add Device** option.



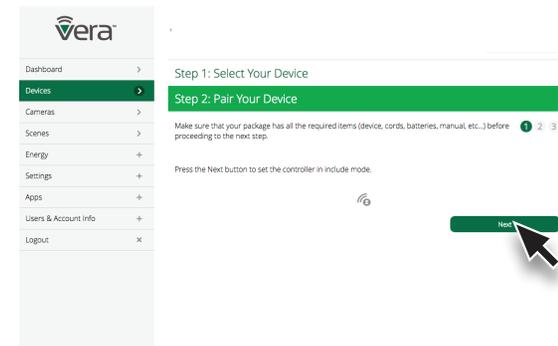
## Step 2

Click on the “+” sign for the Other Device’s category. A list of CyberTAN Custom Device Wizards is displayed. If your specific device is not shown, select the “**Generic Z-Wave Device**” option.



## Step 3

Follow the steps in the Device Wizard to add the device.



After adding a new device, the CyberTAN ZE250 Controller will ask you to name it and choose the room it is (or will be) located in.

**Note:** If the device was previously included with a different Z-Wave system, you’ll need to it exclude it before adding with your CyberTAN ZE250. (You may also need to do this if you have problems Inclusion/Exclusion the first time.) Press the Retry button to start the exclusion process. Once the device is excluded, add it by following the inclusion steps.

# CyberTAN ZE250

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## Controller Reset

**Reset to Network defaults** - Press the **Reset** button 3 times in 6 seconds.

**Factory Reset** - Press the **Reset** button 6 times in 6 seconds.  
The Controller will reboot.

**Note:** *If this controller is the primary controller for your network, resetting it will result in the nodes in your network being orphaned and it will be necessary after the reset to exclude and re-include all of the nodes in the network. If this controller is being used as a secondary controller in the network, use this procedure to reset this controller only in the event that the network primary controller is missing or otherwise inoperable.*



**Figure 2-1:** CyberTAN ZE250 - Front View

# Advanced Z-Wave Functions

These Advanced Z-Wave Functions are usually needed only for specific (and rare) technical situations, or for professional installers creating very large systems, or for developers creating new hardware or software.

You may need to access these advanced functions if there's a problem with your system and you need to reset the Z-Wave network, if you want to upgrade to a different model of CyberTAN Controller, to enable another controller to operate your CyberTAN ZE250, or for other technical situations as described below.

To access Advanced Z-Wave Functions select **Settings** and then **Z-Wave Settings**. Select the **Advanced** tab (Figure 3-1).

**From there you'll be able to access these Advanced Z-Wave options:**

- A** **Reset Z-Wave network**  
Will clear all the user configuration data and assign a new Z-Wave HouseID.
- B** **Copy Z-Wave network from a primary controller**  
Will allow the unit to copy all Z-Wave related information from a Primary Z-Wave Controller and is used with Replication.
- C** **Controller shift**  
Tells CyberTAN to transfer the role of primary controller to another Z-Wave controller. The other Z-Wave controller will become the 'Master controller', and CyberTAN will be a secondary controller. This means the other Z-Wave controller will then be responsible for healing the networking and being the SIS/SUC (a technical Z-Wave term). Normally, by default, CyberTAN is the master controller and is SIS/SUC.

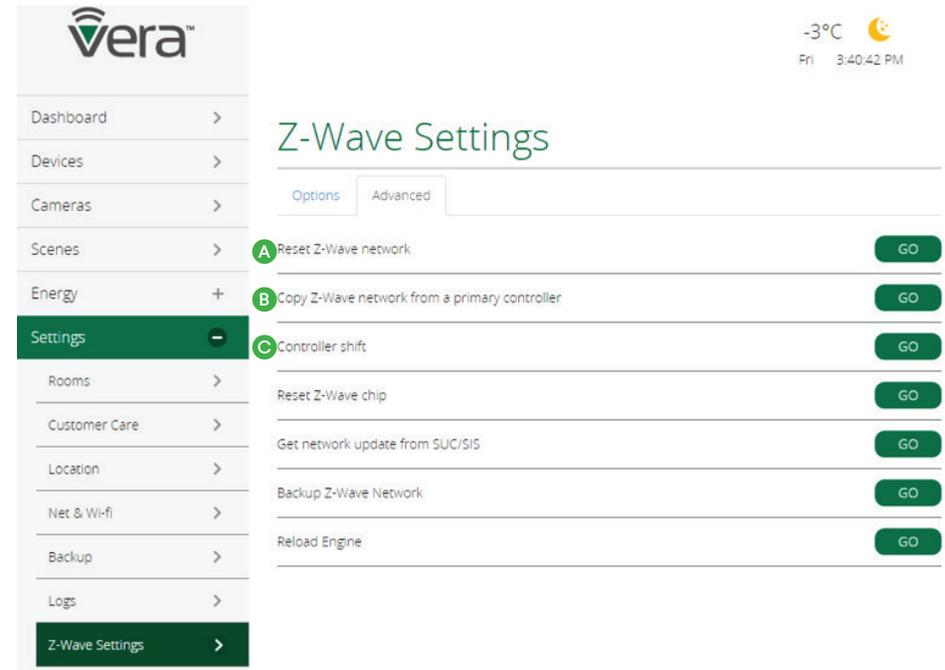


Figure 3-1: Advanced Tab

# Advanced Z-Wave Functions

**D** *Reset the Z-Wave chip*

This option will re-initialize the Z-Wave chip.

**E** *Get network update from SUC/SIS*

This option will update the slave controller network from the primary controller to which it's currently added. This option is used when CyberTAN is a secondary controller.

**F** *Backup Z-Wave Network*

CyberTAN ZE250 has the ability to back up its Z-Wave network and its configuration settings to be restored on another gateway. This procedure is explained on the page below:

<http://support.getvera.com/customer/portal/articles/2345058>

### Learn Mode

Include your controller into an existing Z-Wave network. Steps for CyberTAN ZE250 controller using the web interface.

*Click on Settings > Z-Wave Settings > Advanced > Select 'Copy Z-Wave network from a primary controller'*

This will put the controller into learn mode and shift it to a secondary role. The controller can now receive data from a primary device in the network and associate with other devices in the Z-Wave network via the primary controller.

### Replication

Include another controller and transfer the Z-Wave network data to it. Steps for CyberTAN ZE250 controller using the web interface.

*Click on Settings > Z-Wave Settings > Advanced > Select 'Controller Shift'*

All the Z-Wave devices will be replicated into the new controller. This is used to transfer data from one controller to another. With replication the new controller becomes primary.

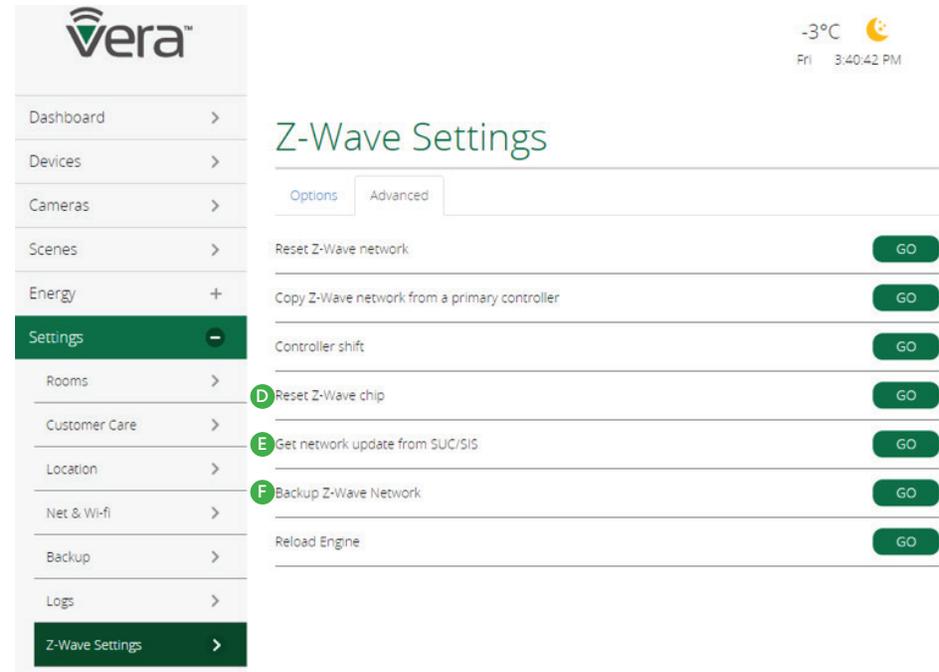


Figure 3-1: Advanced Tab

# Advanced Z-Wave Functions

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## **Basic Command Class Handling**

The basic command class is controlled by CyberTAN and it is not mapped to any other Z-Wave Command Class.

More details can be found on our wiki page.

[http://wiki.mios.com/index.php/ZWave\\_Basic\\_Command\\_Class\\_Mapping](http://wiki.mios.com/index.php/ZWave_Basic_Command_Class_Mapping)

## **Support for Association Command Class**

CyberTAN ZE250 has support for the Lifeline association command class.

```
group id: 1 - lifeline
number of nodes in group: 1
```

More details can be found on our wiki page.

<http://wiki.mios.com/index.php/Association>

## **Support for Multiple Manufacturers in The Same Network**

The controller can be included and operated in any Z-Wave network with other certified Z-Wave devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of the vendor to increase the reliability of the network.

## **Support for sending Z-Wave Commands**

Z-Wave commands can be sent using the CyberTAN API which will allow you to send HTTP requests with the specified command class to the specified node.

More details can be found on our wiki page.

[http://wiki.mios.com/index.php/Luup\\_UPnP\\_Variables\\_and\\_Actions#ZWaveNetwork1](http://wiki.mios.com/index.php/Luup_UPnP_Variables_and_Actions#ZWaveNetwork1)

To send a Z-Wave command you'll need to add the node id of the controlled Z-Wave device and the command class used.

For example to control node 3 and send a BASIC\_SET with a value of 00, the command will be :

```
http://GATEWAY_IP/port_3480/data_request?id=
action&DeviceNum=1&serviceId=urn:
micasaverde-com:serviceId:ZWaveNetwork1&action=
SendData&Node=3&Data=0x20-0x01-0x00
```

**GATEWAY\_IP** is the actual local IP address of the unit.

**Node** is the Z-Wave node the command is sent to.

**Data** will contain the Z-Wave Command Class sent to the device.



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