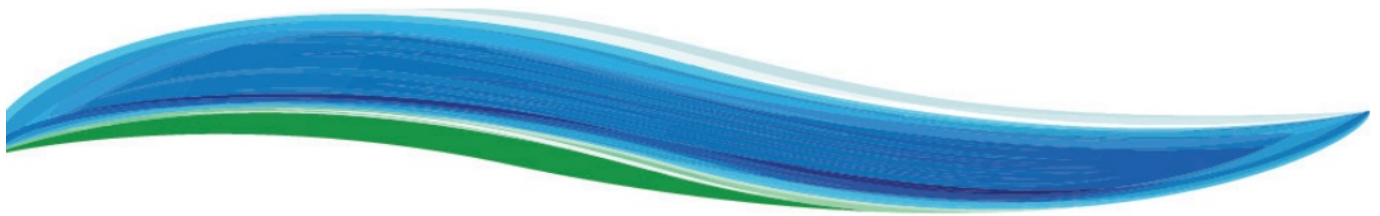


KE2 thermosolution KE2-EM Plus Automatically Finds Multiple Edge Managers User Guide

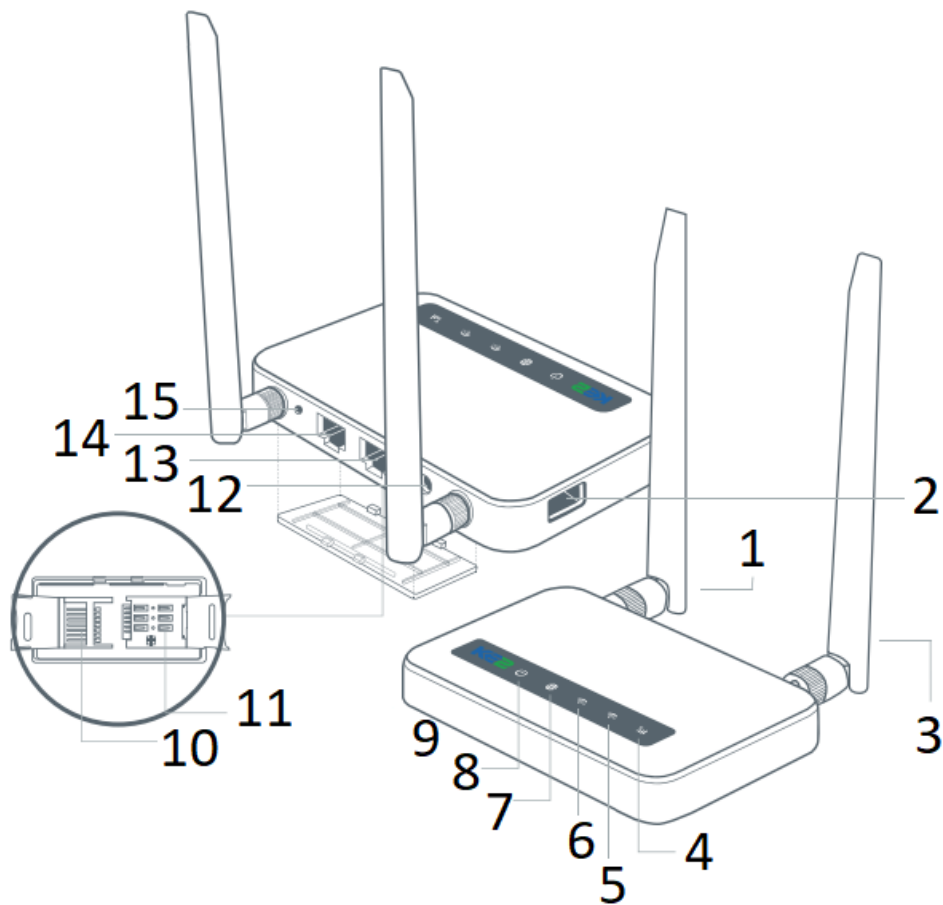


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 - 1.1.2 (2) Connecting to the KE2-EM
 - 1.1.3 (3) Access the KE2-EM Dashboard
 - 1.2 EZ-INSTALL WIZARD
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KE2 EdgeManager Plus (KE2-EM Plus)
KE2 EdgeManager Cell (KE2-EM Cell)

GETTING STARTED, EZ-INSTALL WIZARD GUIDE, WIRELESS SETUP & MODBUS SETUP/WIRING



1. 2.4 GHz / 5 GHz
2. USB2.0 port
3. 4G LTE – (KE2-EM Cell Only)
4. **Cell** (KE2-EM Cell Only)
GSM Carriers – AT&T, T-Mobile, Mint, and Many more
5. 2.4 GHz Wi-Fi
6. 5 GHz Wi-Fi
7. WAN
8. Power
9. Lights:
10. MicroSD card slot
11. MicroSIM card slot*
12. Power port
13. LAN Ethernet port
14. WAN Ethernet port
15. Reset button

* KE2-EM Cell Only – SIM card not included, use only GSM carriers.

KE2-EM v3.0 – Q.5.72 November 2023

GETTING STARTED

(1) Power On

Plug the power cable into the power port of the KE2-EM. Use the **12V/1.5A** power adapter supplied with the KE2-EM in order to ensure proper operation.

Note: If necessary to perform a Factory Reset, hold down the Reset button for 10 seconds, then release. Caution – all User Data will be cleared!

(2) Connecting to the KE2-EM

You can connect to the KE2-EM via Wi-Fi or Ethernet Cat5e cable. Choose the most convenient method.

Note: This step only connects your mobile/ tablet/laptop/desktop to the local area network (LAN) of the KE2-EM. Internet access is not yet configured. In order to connect to the Internet, please finish the setup procedures below and then follow **EZ-Install Wizard** to setup an Internet connection.

Method 1 – Connect via Wi-Fi

Search for the KE2-EM's Wi-Fi network (SSID) in your device's list of Wi-Fi networks and input the default password – All characters are upper case: **KE2EMPLS#1**.

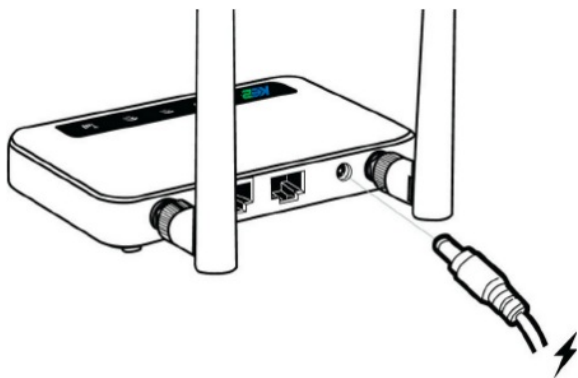
The SSID is printed on the label on the bottom of the KE2-EM in the following formats:

KE2EMPLUS-XXXXXX (Ex: KE2EMPLUS-04CDC7)

KE2EMPLUS-XXXXXX-5G (Ex:KE2EMPLUS-04CDC7-5G)

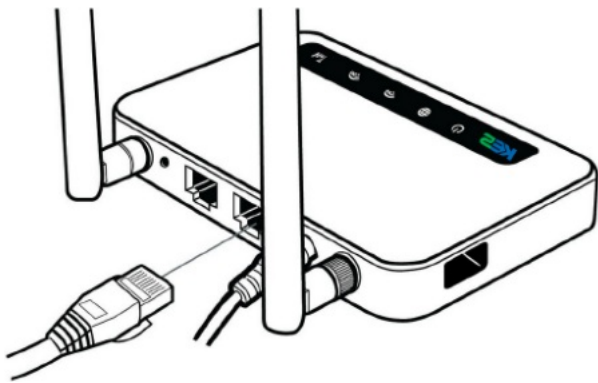
Method 2 – Connect via LAN

Connect your device to the LAN port of the KE2-EM via Ethernet cable.



Note: A MicroSD card is pre-installed in the KE2-EM.
DO NOT remove or replace the MicroSD card.

KE2-EM Cell only – install a GSM SIM card for internet/ backup internet if desired.



Note: Your device will not display both Wi-Fi networks unless it supports both 2.4GHz and 5GHz Wi-Fi.

KE2EMCELL-XXXXXX (Ex: KE2EMCELL-04CDC7)

KE2EMCELL-XXXXXX-5G (Ex: KE2EMCELL-04CDC7)

(3) Access the KE2-EM Dashboard

Open a web browser (Firefox, Chrome, Edge, Safari) and visit <https://em.ke2.io> or <http://192.168.50.1>. If this is a new install, you will be guided using the **EZ-Install Wizard**.

EZ-INSTALL WIZARD

(1) Password Setup

Email – Optional field.

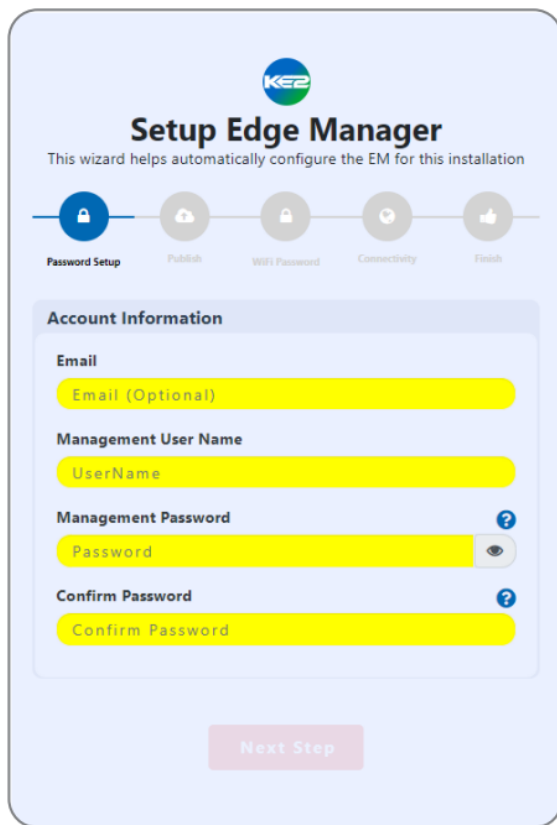
User Name – Management Console User Name. The KE2-EM secures access to the Management Console with these credentials. You are required to create this account on first install.

Password – Management Console Password. The KE2-EM secures access to the Management Console with these credentials. You are required to create this password on first install. Please record both User Name and Password for future reference. You will need both to login to the Management Console. This password requires 8-15 characters, at least one upper and lower case, a number, and a special character (!@#\$()%&*).

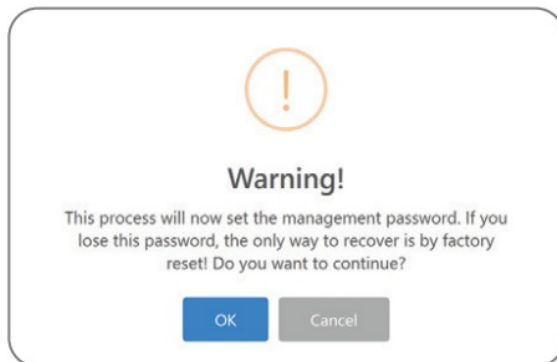
Confirm Password – Confirm Password as entered in the prior field. You are required to confirm this password on first install.

The **Next Step** button will be available once all fields are entered properly.

You will be prompted to **CONFIRM** the management account credentials to continue.



The Setup Edge Manager screen features the KE2 logo at the top. Below it, the title "Setup Edge Manager" is displayed, followed by the subtitle "This wizard helps automatically configure the EM for this installation". A progress bar with five icons (Password Setup, Publish, WiFi Password, Connectivity, Finish) is shown. The "Password Setup" step is currently active. The main form area is titled "Account Information" and contains four input fields: "Email" (with a placeholder "Email (Optional)"), "Management User Name" (with a placeholder "UserName"), "Management Password" (with a placeholder "Password" and a toggle icon), and "Confirm Password" (with a placeholder "Confirm Password"). A "Next Step" button is located at the bottom right of the form area.



The Warning dialog box has a large orange exclamation mark icon at the top. Below the icon, the word "Warning!" is displayed in bold. The text reads: "This process will now set the management password. If you lose this password, the only way to recover is by factory reset! Do you want to continue?". At the bottom, there are two buttons: "OK" (blue) and "Cancel" (gray).

(2) Publish

Auto Publish ALL devices – This option allows you to automatically publish any KE2 Therm devices communicating with the KE2-EM to the Portal specified below.

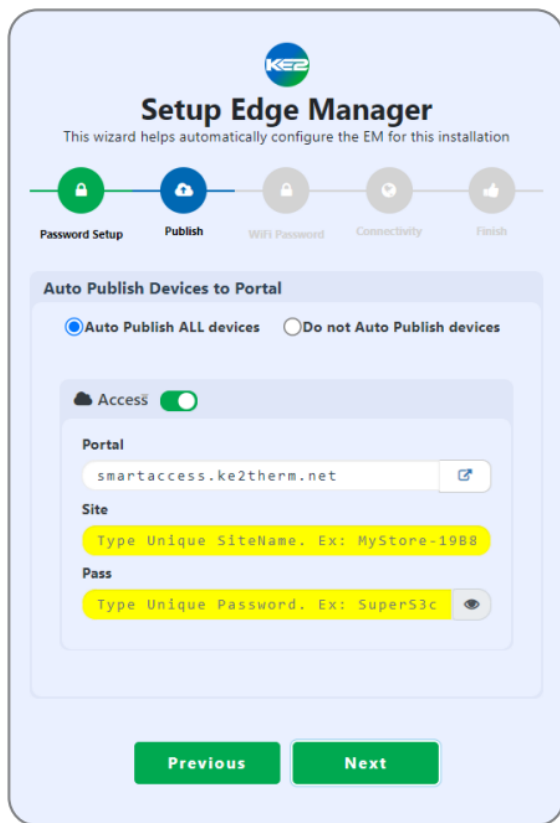
Do not Auto Publish devices – If you do not wish your KE2 Therm devices to be automatically published to the Portal, select this option.

Portal – This is the remote portal that your devices will be published to. In most cases, this does not need to be changed.

Site – This is the unique Site name on the Portal where all devices on the KE2-EM will be published. A Site name should be descriptive. Ex: MyStore-04CD

Pass – This field contains the Portal password used to publish devices. This password should be 8-15 characters, with upper and lower case, including numerals and special characters (!@#\$()%&*).

The **Next** button will be available once all requirements have been satisfied.



Setup Edge Manager
This wizard helps automatically configure the EM for this installation

Progress: Password Setup (Active), Publish, WiFi Password, Connectivity, Finish

Auto Publish Devices to Portal

☒ Auto Publish ALL devices ☐ Do not Auto Publish devices

Access ☒

Portal
smartaccess.ke2therm.net

Site
Type Unique SiteName. Ex: MyStore-19B8

Pass
Type Unique Password. Ex: Super53c

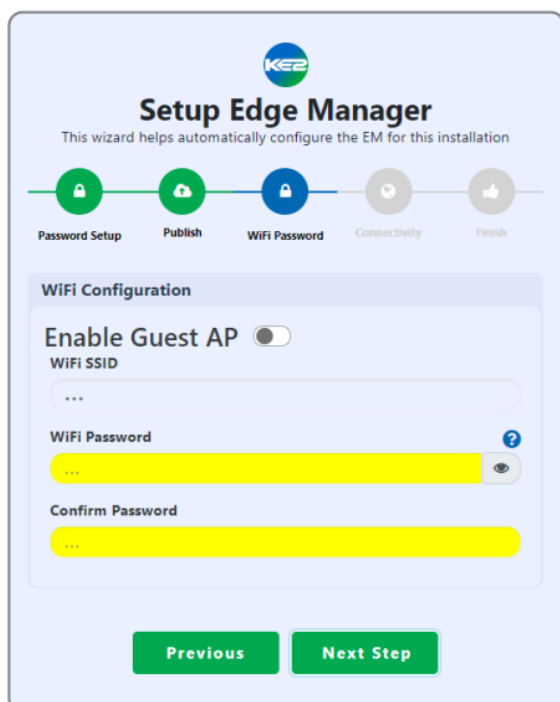
Previous **Next**

(3) Wi-Fi Password

Wi-Fi Password – For security purposes, you will be prompted to change the default Wi-Fi Password during installation. A minimum of 8 characters is required, but 14 is recommended. Please record this Wi-Fi password. You will need it to reconnect later.

Confirm Password – Confirm Password as entered in the prior field. You are required to confirm the password before the **Next Step** button will become available.

Enable Guest AP – Allows Wi-Fi access to the dashboard without a password. Internet access is not available when connected to the Guest AP.



Setup Edge Manager
This wizard helps automatically configure the EM for this installation

Progress: Password Setup, Publish, WiFi Password (Active), Connectivity, Finish

WiFi Configuration

Enable Guest AP ☐

WiFi SSID
...

WiFi Password
... ?

Confirm Password
...

Previous **Next Step**

(4) Connectivity

This page helps you connect this KE2-EM to the Internet. If you want to publish devices to the Portal for remote access, or receive alarm notifications, the KE2-EM must be connected to the Internet.

Connect to the Internet

Allow vendor assistance – Allows KE2 Therm to remotely connect to the KE2-EM for technical support.

Ethernet Connection – WAN Port – Select this option if you are using a Cat5e Ethernet cable to connect the KE2-EM to the Internet. The KE2-EM will automatically request an IP address from the network.

Stand Alone (No Internet) – Select this option if you do not want to connect the KE2-EM to the Internet.

Wireless Bridge / Uplink – Select this option if you want to wirelessly connect to an available Wi-Fi network within range of the KE2-EM and use it to access the Internet. This mode is a convenient way to connect to another Wi-Fi Access Point, Hotspot, or Guest Network for quick Internet access. Be sure to consider any security implications this may cause. If in doubt, contact your local IT or help desk for direction and support.

Wireless Bridge / Uplink – has additional configuration options:

The KE2-EM has two wireless radios (2.4GHz and 5GHz) to connect to a pre-existing Wi-Fi network for Internet access. This provides the KE2-EM access to the Internet without running Ethernet cables. Choose only **ONE**, 2.4GHz OR 5GHz, for the Wireless Bridge.

The screenshot shows the 'Setup Edge Manager' wizard interface. At the top, the KE2 logo is displayed. Below it, the title 'Setup Edge Manager' is followed by the subtitle 'This wizard helps automatically configure the EM for this installation'. A progress bar with five icons (lock, cloud, Wi-Fi, connectivity, finish) indicates the current step is 'Connectivity'. The main section is titled 'Internet Connection' and contains a toggle for 'Allow vendor assistance' which is currently turned off. Below this, the 'Connectivity Details' section asks the user to 'Please select connection mode:'. There are three radio button options: 'Connect to the Internet' (which is selected), 'Ethernet Connection - WAN port', and 'Wireless Bridge / Uplink'. Under 'Connect to the Internet', there are two sub-options: 'Ethernet Connection - WAN port' (selected) and 'Wireless Bridge / Uplink'. At the bottom, there is a green 'Next Step' button.

NOTE: If using cellular only for internet, select **Stand Alone (No Internet)**.

Name – Select this dropdown to display Wi-Fi networks within range. If a network does not appear, it may be on the other frequency (2.4GHz or 5GHz).

Use hidden SSID – Use this option to specify the SSID of a hidden Wi-Fi network.

Pass – This is the password field for the Wi-Fi network found previously. Input the password for the Wi-Fi network.

Set as Priority – This is an advanced option and usually not required. This option allows network traffic to be delivered to the Wi-Fi interface first. Enable this only at the instruction of an IT representative.

Save Changes – to complete the Wireless Bridge / Uplink connection, you must select save changes.

The **Next Step** button can be selected if Stand Alone (No Internet) was selected previously.

Note: The wireless radio (2.4GHz or 5GHz) selected for the Wireless Bridge will **no longer** be able to be used as an Access Point for the KE2-EM. If you lose access to the KE2-EM and cannot reconnect, perform a Factory Reset and select the other wireless radio for the Wireless Bridge.

The screenshot displays the 'Internet Connection' configuration page. At the top, there is a toggle for 'Allow vendor assistance' which is turned on. Below this, the 'Connectivity Details' section prompts the user to 'Please select connection mode:'. Three radio buttons are present: 'Connect to the Internet' (selected), 'Ethernet Connection - WAN port', and 'Wireless Bridge / Uplink'. Under the 'Wireless Bridge / Uplink' section, there are two radio buttons for 'Wi-Fi 2.4GHz' and 'Wi-Fi 5GHz', both of which are turned on. Each radio button has its own configuration sub-section. For 'Wi-Fi 2.4GHz', the 'Wifi Bridge' checkbox is unchecked, the 'Name' dropdown is set to 'Nothing selected', the 'Use hidden SSID' checkbox is unchecked, the 'Pass' field is highlighted in yellow, and the 'Set as Priority' checkbox is unchecked. A 'Save Changes' button is located at the bottom of this sub-section. The 'Wi-Fi 5GHz' sub-section has identical fields and a 'Save Changes' button. At the bottom of the main configuration area, there is a radio button for 'Stand Alone (No Internet)' which is currently unselected. At the very bottom of the page, there are two green buttons: 'Previous' and 'Next Step'.

Wi-Fi Example 1:

User connects their smart device to the **KE2EMPLUS-04CDC7** 2.4GHz Wi-Fi network to access the KE2-EM Plus. The 5GHz radio is used to create the Wireless Bridge to the existing Wi-Fi network.



1. **KE2EMPLUS-04CDC7**
2. **KE2-EM Plus**
KE2-EM Cell
3. **KE2EMPLUS-04CDC7-5G**
4. **Customer / Premise**
5GHz Access Point

Wi-Fi Example 2:

User connects their smart device to the **KE2EMPLUS-04CDC7-5G** 5GHzWi-Fi network to access the KE2-EM Plus. The 2.4GHz radio is used to create the Wireless Bridge to the existing Wi-Fi network.



1. **KE2EMPLUS-04CDC7-5G**
2. **KE2-EM Plus**
KE2-EM Cell
3. **KE2EMPLUS-04CDC7**
4. **Customer / Premise**
2.4GHz Access Point

Wi-Fi Tips:

Use 2.4GHz Wi-Fi Bridge for sites using traditional, slower Internet Access Points.

Use 5GHz Wi-Fi Bridge for sites using newer, faster Internet Access Points.

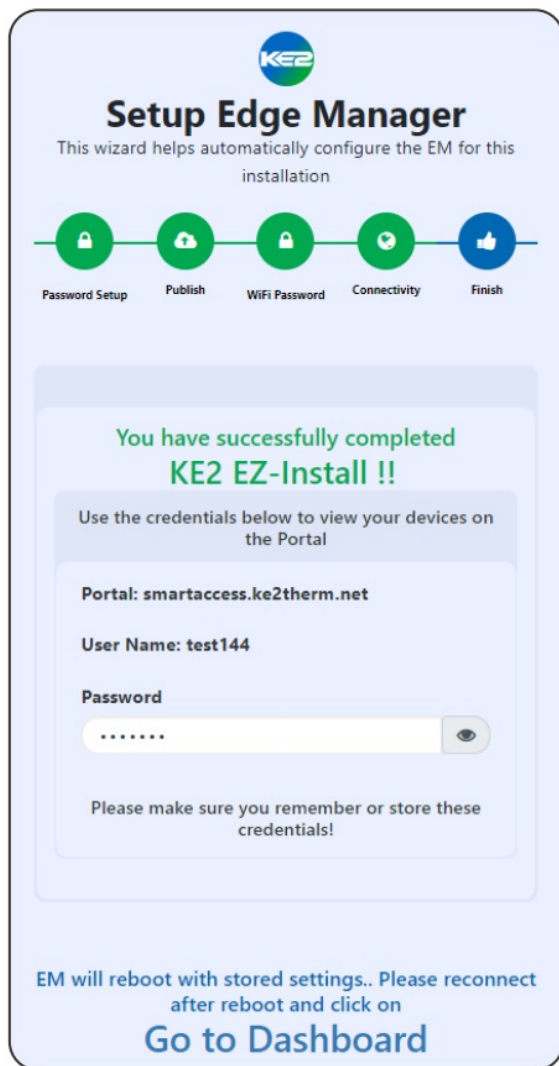
Note: 2.4GHz wireless transmissions can travel farther than 5GHz transmissions.

DO NOT ATTEMPT to Wi-Fi Bridge both 2.4GHz and 5GHz!!!

(5) Finish

Congratulations!! You have successfully completed the **EZ-Install Wizard**. The KE2-EM will need to reboot with

the configuration options you have selected. This process will take less than two minutes to complete. To reconnect, simply use the same method you used in **Step (2) Connecting to the KE2-EM** as described earlier. Don't forget, the Wi-Fi password and management credentials were changed during the **EZ-Install Wizard** setup.



The screenshot shows the 'Setup Edge Manager' interface. At the top is the KE2 logo and the title 'Setup Edge Manager'. Below the title, it says 'This wizard helps automatically configure the EM for this installation'. A progress bar shows five steps: Password Setup, Publish, WiFi Password, Connectivity, and Finish. The 'Finish' step is highlighted with a thumbs-up icon. The main content area displays a green message: 'You have successfully completed KE2 EZ-Install !!'. Below this, it instructs the user to use the credentials to view devices on the Portal. The credentials listed are: Portal: smartaccess.ke2therm.net, User Name: test144, and Password: a masked field with a toggle to show/hide. A reminder says 'Please make sure you remember or store these credentials!'. At the bottom, it states 'EM will reboot with stored settings.. Please reconnect after reboot and click on Go to Dashboard' with a blue button labeled 'Go to Dashboard'.

WIRELESS SENSOR SETUP

IMPORTANT

To ensure the sensors have the strongest wireless connection possible, please follow the steps in:

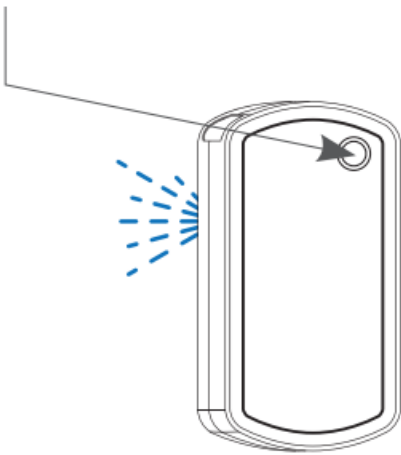
Video 125 – Best Practices for Deploying a Wireless Monitoring Solution



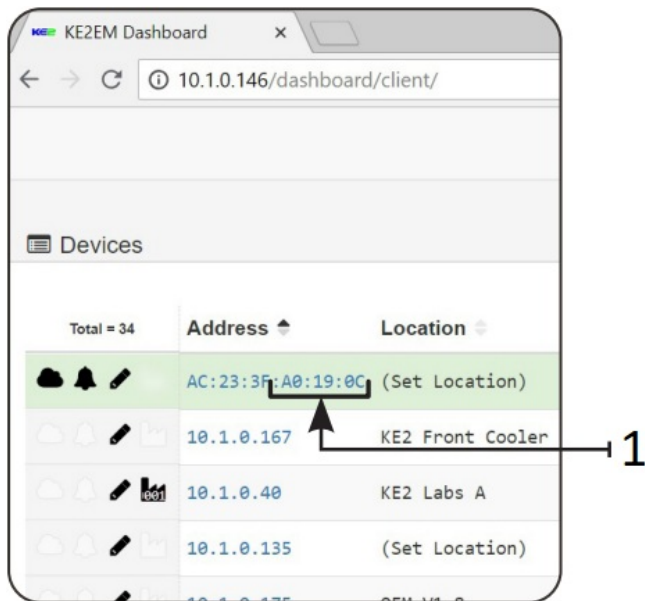
or <https://bit.ly/2Prb1Oc>

(1) Power On

Press button until blue blinking light comes on.



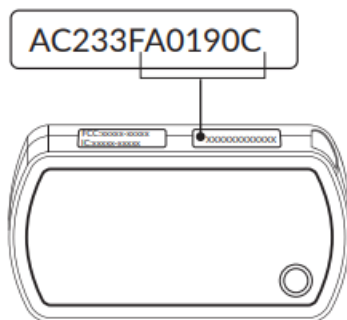
(2) Sensors should automatically display on the Dashboard.



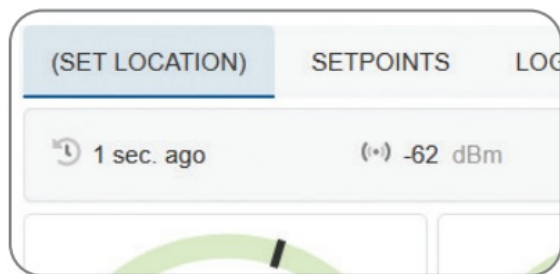
1. Use the MAC address to find the sensor on the list.
Click the link to open the sensor's page.

(3) The last 6 digits of the MAC address are unique for each sensor.

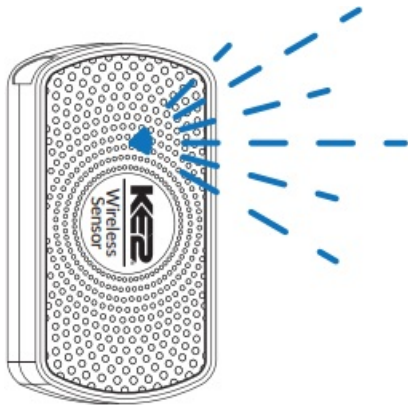
Ex.



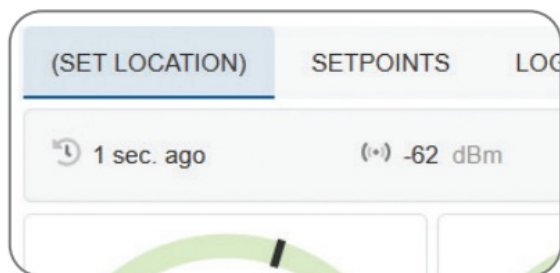
(4) The timer in the top left shows how often the wireless sensor is checking in with the KE2-EM. This helps determine optimal sensor location.



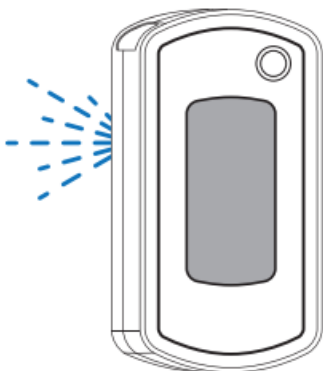
(5) Place the sensor where you think you want it.



(6) If the timer reads 1 second or less, the location is ideal. Below 10 seconds is good. If 20 seconds or more, consider moving or changing the orientation of the sensor.



(7) Once the location is validated, apply Velcro or adhesive strip, and place sensor.



(8) Record on the tracking chart.

KE2 Wireless Sensor
Tracking Chart

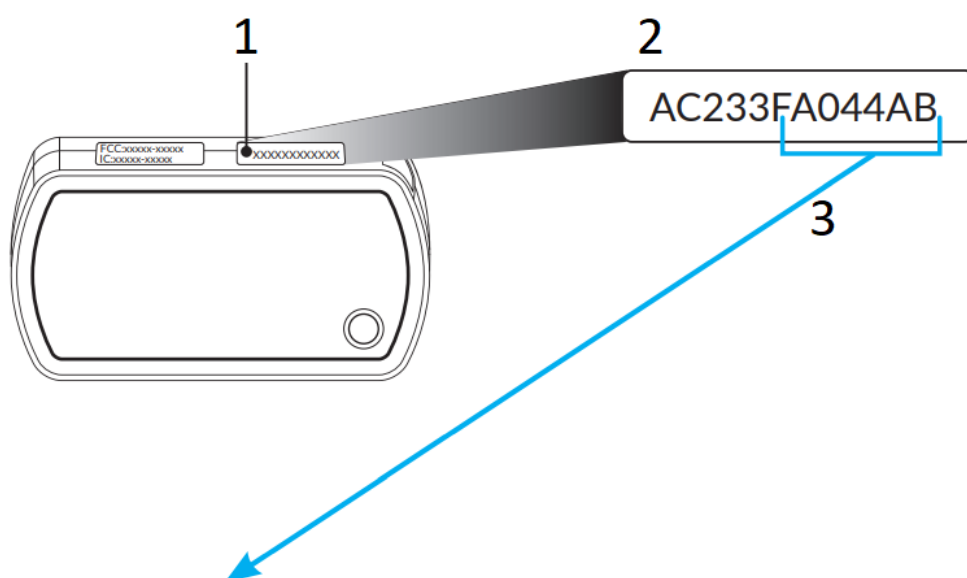
12-Digit Sensor MAC ID
(alphanumeric)

Example
AC233FA044AB

Last 6 digits uniquely
identify a specific sensor

Sensor ID / MAC	Location
Ex: AO 44 AB	To help you locate the sensor later, write a description of the sensor's physical location. (Example: North wall walk-in cooler)

(9) Repeat steps (1) through (8) for each additional sensor. Store tracking chart in a secure location, and take a picture of it for future reference.



Sensor ID / MAC	Location
Ex: A0 44 AB	To help you locate the sensor later, write a description of the sensor's
	physical location. (Example:North wall walk-in cooler)



Once your Tracking Chart is filled in, we suggest taking a picture of the list, to serve as a backup copy.

1. 12-Digit Sensor MAC ID

(alphanumeric)

2. Example

3. Last 6 digits uniquely identify a specific sensor

MODBUS SETUP

(1) KE2 Temp + Air Defrost, KE2 Adaptive Control, & KE2 Low Temp

Change Modbus address on each controller



Each controller's Modbus address must be unique. Available addresses are 2-247.

- **KE2 Temp:** Press and hold **ENTER** to access the setpoints menu.
- **KE2 Adaptive / Low Temp:** Press and hold **BACK** to access the Advanced menu.

- **tS** is displayed



- Use the arrow until you see **Adr** (Address)



- Press **ENTER** to display the current address (default =1)



- Change the address by pressing or

Press **ENTER** momentarily to move to the next digit if necessary. Available addresses are 2 to 247.

- When address is set to the preferred value (Ex. 24), press and hold **ENTER** for 3 seconds to save the address.

Example:



- The controller will return to the **Adr** screen when the setting is saved.
- The setting change can be verified by pressing **ENTER** again.
- To exit, press **BACK** several times.



(1) KE2 Temp + Valve

Change Modbus address on each controller



Each controller's Modbus address must be unique. Available addresses are 2-247.

- Press and hold **BACK** to access the Advanced menu.



- **CtL** is displayed

- Use the arrow until you see **Adr** (Address)



- Press **ENTER** to display the current address (default =1)
- Change the address by pressing or

Press **ENTER** momentarily to move to the next digit if necessary. Available addresses are 2 to 247.

- When address is set to the preferred value (Ex. 123), press and hold **ENTER** for 3 seconds to save the address.

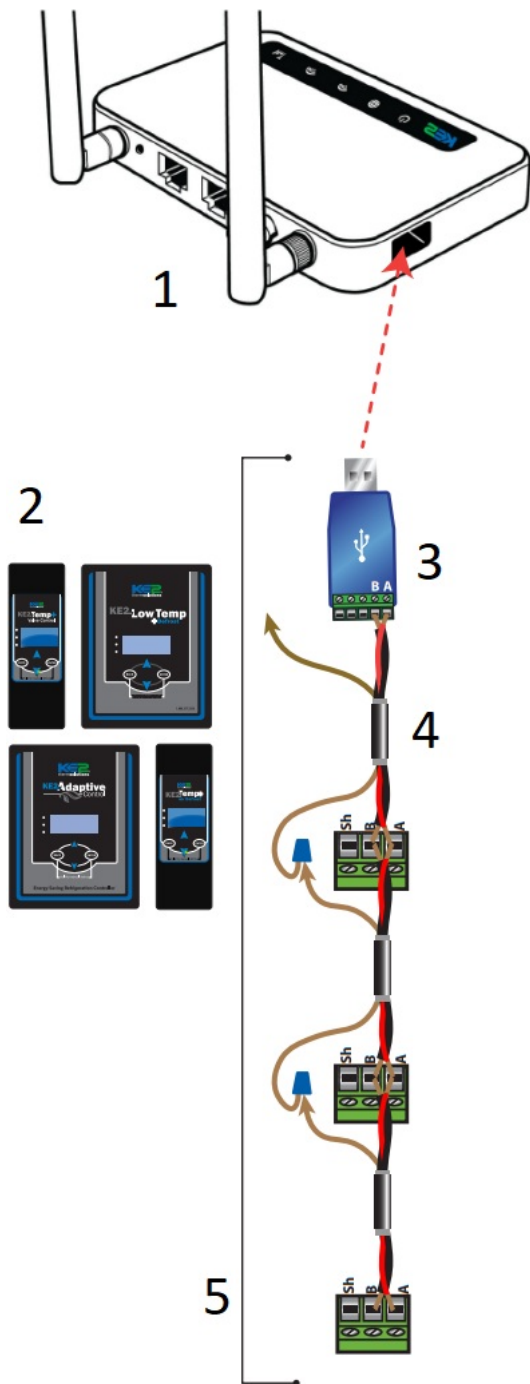


Example:

- The controller will return to the **Adr** screen when the setting is saved.
- The setting change can be verified by pressing **ENTER** again.
- To exit, press **BACK** several times.



MODBUS WIRING



1. **KE2-EM Plus**
KE2-EM Cell
2. **KE2 Temp + Valve**
KE2 Low Temp
KE2 Adaptive Control
KE2 Temp + Air Defrost
3. **Serial Adaptor**
4. **Shield** – not connected, or connected to earth ground.
5. Do not connect the shield wire to any of the controllers. Connect shield to shield using a wire nut.

If using the KE2-EM to communicate with the KE2 Temp + Air Defrost, KE2 Temp + Valve, KE2 Low Temp, or KE2 Adaptive, the controllers must be wired to the EM.

- Connection must be daisy chained.

- Maximum 1,000ft total cable length.
- Use only cables that meet RS-485 specifications. Cat5e cable is acceptable in most situations (use one of the twisted pairs). Use 24 AWG or larger.

TECHNICAL SUPPORT

Factory/Login Credentials Reset

If you are unable to access the KE2 Dashboard or cannot connect to the KE2-Edge Manager (KE2-EM), you can press the **RESET** button:

- Press the reset button for 1 second or less to reboot the KE2-EM.
- Press and hold the reset button for 3 to 5 seconds, then release to reset KE2-EM credentials to the default of ke2admin/ke2admin. You will be prompted to change the username and password from default upon logging in.
NOTE: Any Modbus controller and wireless sensor login credentials will also be reset to ke2admin/ke2admin.
- Press and hold the reset button for at least 10 seconds, then release to reset the KE2-EM to factory settings.
WARNING – all settings and user data will be cleared.

Technical Support

If you are unable to access the KE2 Dashboard or cannot connect to the KE2-Edge Manager (KE2-EM), you can press the **RESET** button:

- For more detailed / updated instructions, please visit our website <https://ke2therm.com>
- For additional questions, use one of the following:
 - Send an E-mail to techsupport@ke2therm.com
 - Visit our YouTube channel <https://youtube.com/user/KE2Therm/videos>
 - Call us at [636-266-0140](tel:636-266-0140) (M-F, 8am – 5pm CST)

If calling, please make sure you are running the latest version and have access to the KE2-EM.



Visit <https://ke2therm.com/literature/literature-ke2-edge-managers/>
or use the QR code to view all KE2-EM literature:

Record Credentials (optional)

Record your credentials in the space below and secure in a safe location for future reference:


Management Console	
Username:	Password:
KE2 SmartAccess	
Site:	Password:
Wi-Fi	
Password:	
KE2-EM Plus/KE2-EM Cell	
Serial No:	MAC Address:

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www.ke2therm.com

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KE2-EM v3.0 – Q.5.72 November 2023

Documents / Resources



[KE2 thermosolution KE2-EM Plus Automatically Finds Multiple Edge Managers](#) [pdf] User Guide

KE2-EM Plus Automatically Finds Multiple Edge Managers, KE2-EM Plus, Automatically Finds Multiple Edge Managers, Finds Multiple Edge Managers, Multiple Edge Managers, Edge Managers

References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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