Manuals+ — User Manuals Simplified.
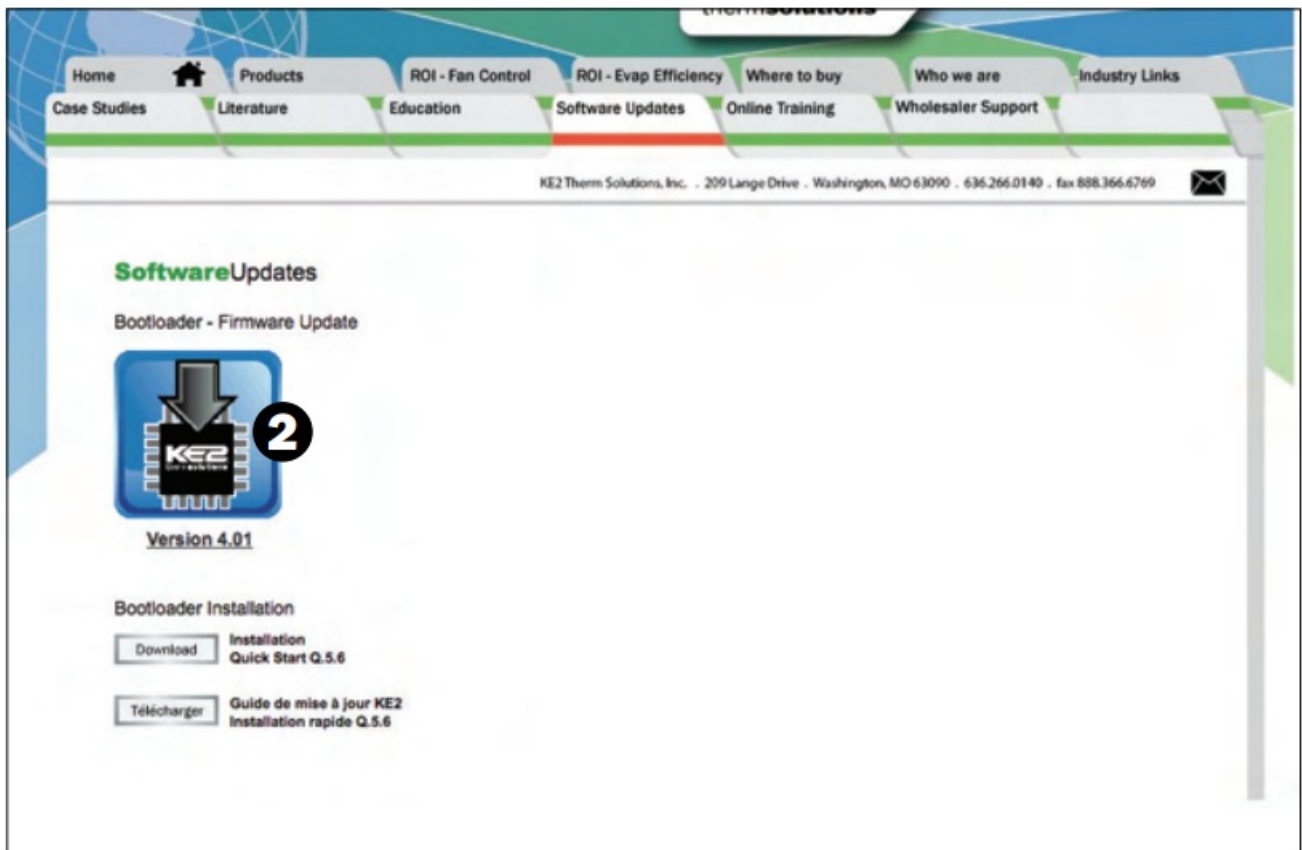
KE2 Bootloader Guide User Guide

Contents

KE2 Bootloader Guide

Product Information

Specifications

- **Product Name:** KE2 Therm Controller
- **Firmware Version:** 4.01
- **Power Source:** 110V/220V
- **Network Connection:** Ethernet

Getting Started

To perform a Bootloader Firmware Update for a KE2 Therm controller, you will need:

- The controller you wish to update
- 110V/220V power source for the controller, as appropriate
- PC/laptop to run the firmware update utility
- The firmware update utility downloaded from **www.ke2therm.com**
- KE2 Smart Gate to provide network connection for controller & PC/laptop (optional)
- Ethernet cable(s) to provide wired network connections between the controller, PC/laptop, & the KE2 Smart Gate (if used)

Part 1A – Using a KE2 Smart Gate to connect to the KE2 Evap

[Instructions for using a KE2 Smart Gate to connect to the KE2 Evap]

Part 1B – Connecting a computer directly to the KE2 Evap

[Instructions for connecting a computer directly to the KE2 Evap]

Part 2 – Turn on the controller

[Instructions for turning on the controller]

Part 3 – Launch & execute the firmware update utility

[Instructions for launching and executing the firmware update utility]

Part 4 – Confirm the firmware update is installed properly

[Instructions for confirming the firmware update installation]

Preliminary Steps

Before you begin the boot loading process, you will need to acquire and extract the program using the following steps:

1. Download and extract the bootloader program
    1. Go to **www.ke2therm.com** and click on the Software Updates tab.
    2. Click on the icon for the Version 4.01 update and download it to a location of your choice.
    3. Find the downloaded zip (archive) file and open it.
        - Windows 7 & 8 – Double-click the zip file
        - Windows XP – use a zip program such as Winzip or 7zip to open the archive (zipped) file
    4. Extract the files to a location of your choice.
        - Windows 8 – click "Extract all"
        - Windows 7 – click on "Extract all files" in the menu bar at the top of the window you opened in step 3
        - Windows XP – extract the files using the program you selected in step 3
    5. Navigate to the newly created folder from Step 4.
    6. Verify the folder is the standard folder icon and not the icon with a zipper image.
    7. Open the folder (by double-clicking) and verify there are four files in the folder.
    8. Remember this location for running the firmware update utility.

FAQ

- **Q:** How can I update the firmware of my KE2 Therm controller?
- **A:** To update the firmware of your KE2 Therm controller, follow the instructions provided in the user manual. Make sure you have the necessary equipment and software, such as a PC/laptop, Ethernet cable, and the firmware update utility downloaded from **www.ke2therm.com**.
- **Q:** What is Bootloader mode?
- **A:** Bootloader mode is a special mode that allows your KE2 Therm controller to receive firmware updates over Ethernet. It suspends normal controller operation and enables the controller to receive updates from the

Firmware Update Utility.

- **Q:** Can I connect my computer directly to the KE2 Evap without using a KE2 Smart Gate?
- **A:** Yes, you can connect your computer directly to the KE2 Evap without using a KE2 Smart Gate. Follow the instructions provided in Part 1B of the user manual for connecting a computer directly to the KE2 Evap.

Introduction

Your KE2 Therm controller has the built-in capability to receive firmware updates over Ethernet. To perform this update over the network you will need to place your controller in Bootloader Mode, and then use the Firmware Update Utility provided by KE2 Therm, as described below.

Placing your controller in Bootloader mode suspends normal controller operation & allows the controller to receive a firmware update from the Firmware Update Utility. The Firmware Update Utility runs on your local PC/laptop and will discover any KE2 Therm controller that has been placed in Bootloader Mode. Then you can apply firmware updates to your KE2 Therm controller via your wired network.

Getting Started
To perform a Bootloader Firmware Update for a KE2 Therm controller, you will need:

- The controller you wish to update
- 110V/220V power source for the controller, as appropriate
- PC/laptop to run the firmware update utility
- The firmware update utility was downloaded from **www.ke2therm.com**. (See Preliminary Steps on page 3)
- KE2 Smart Gate to provide network connection for controller & PC/laptop
- Ethernet cable(s), to provide wired network connections between the controller, PC/ laptop, & the KE2 Smart Gate, if used.
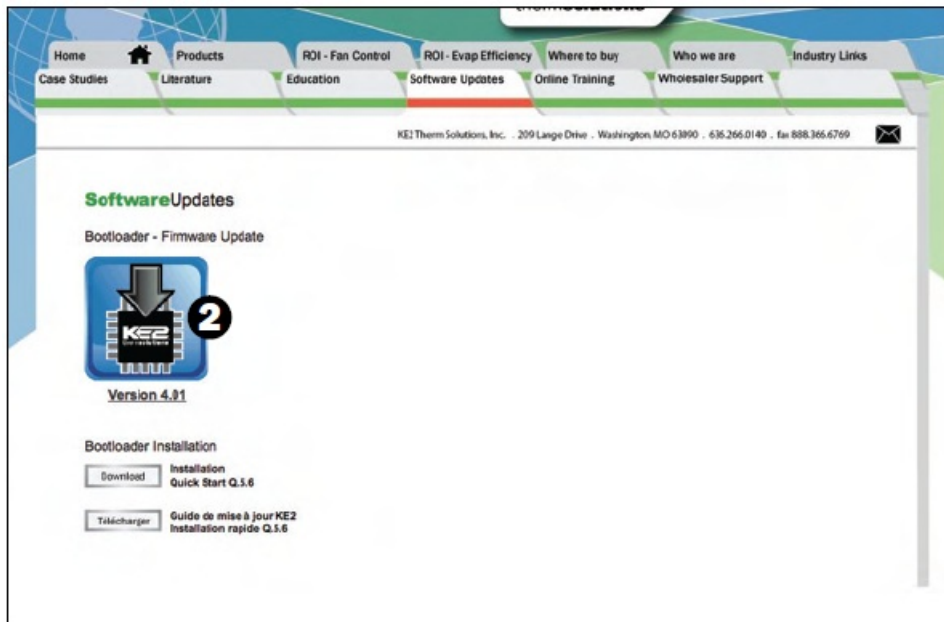
Preliminary Steps
Before you begin the Bootlolading process you will need to acquire and extract the program using the following steps:

## Download and extract the bootloader program

1. Go to **www.ke2therm.com** and click on the Software Updates tab.
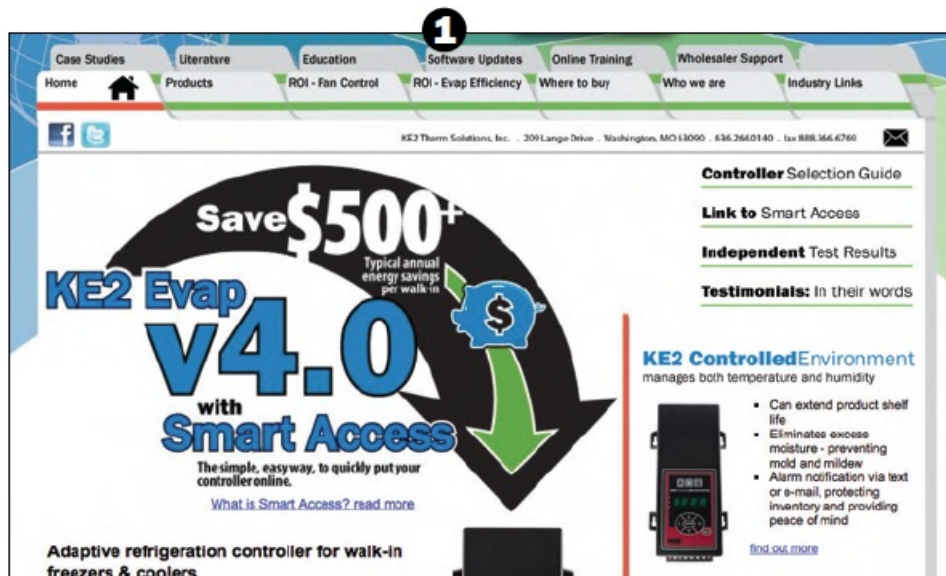
2. Click on the icon for the Version 4.01 update and download to a location of your choice.

3. Find the downloaded zip (archive) file and open Windows 7 & 8 – double click the zip file Windows XP – use a zip program such as Winzip or 7zip to open the archive (zipped) file

4. Extract the files to a location of your choice (extracting to the desktop is an easy location to find)
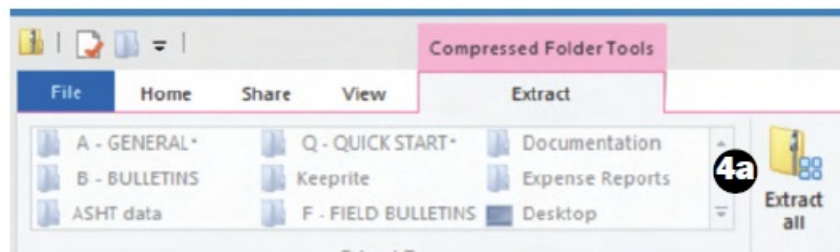
- 4a Windows 8 – click "Extract all"
- 4b Windows 7 – click on "Extract all files" in the menu bar at the top of the window you opened in step 3
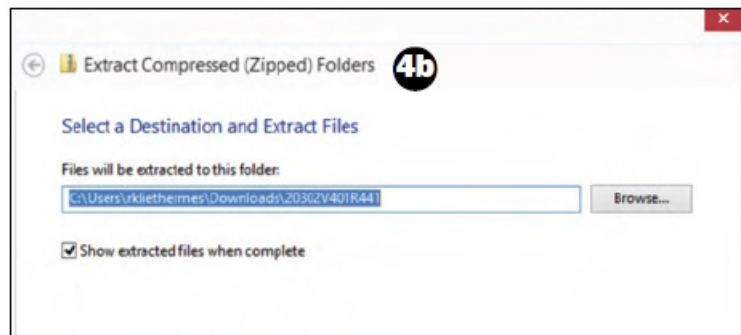
- 4c Windows XP – extract the files using the program you selected in step 3
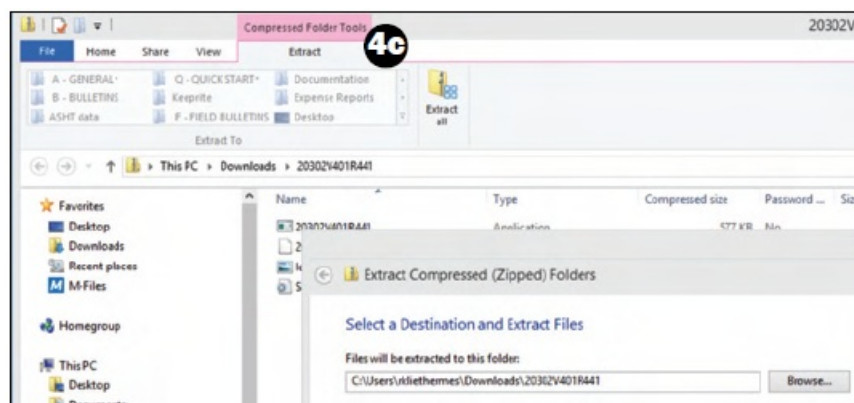
5. Navigate to the newly created folder from Step 4
6. Verify the folder is the standard folder icon and not the icon with a zipper image

YES   **NO**

7. Open the folder (by double-clicking) and verify there are four files in the folder.
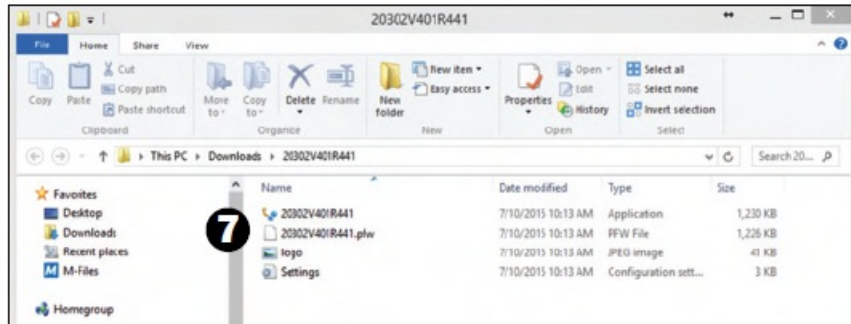
8. Remember this location for running the bootload process

9. Proceed to Part1A – if connecting through a KE2 Smart Gate (page 5) Part 1B – if connecting directly to the KE2 Evap

Part 1A – Using a KE2 Smart Gate to connect to the KE2 Evap

1. Plug the power cable into the KE2 Smart Gate and the other end into an electrical outlet.
2. Confirm that the PWR indicator is ON.
3. Connect a Cat5 network cable from the computer to an available Ethernet port on the KE2 Smart Gate.

Make sure your computer is powered on.
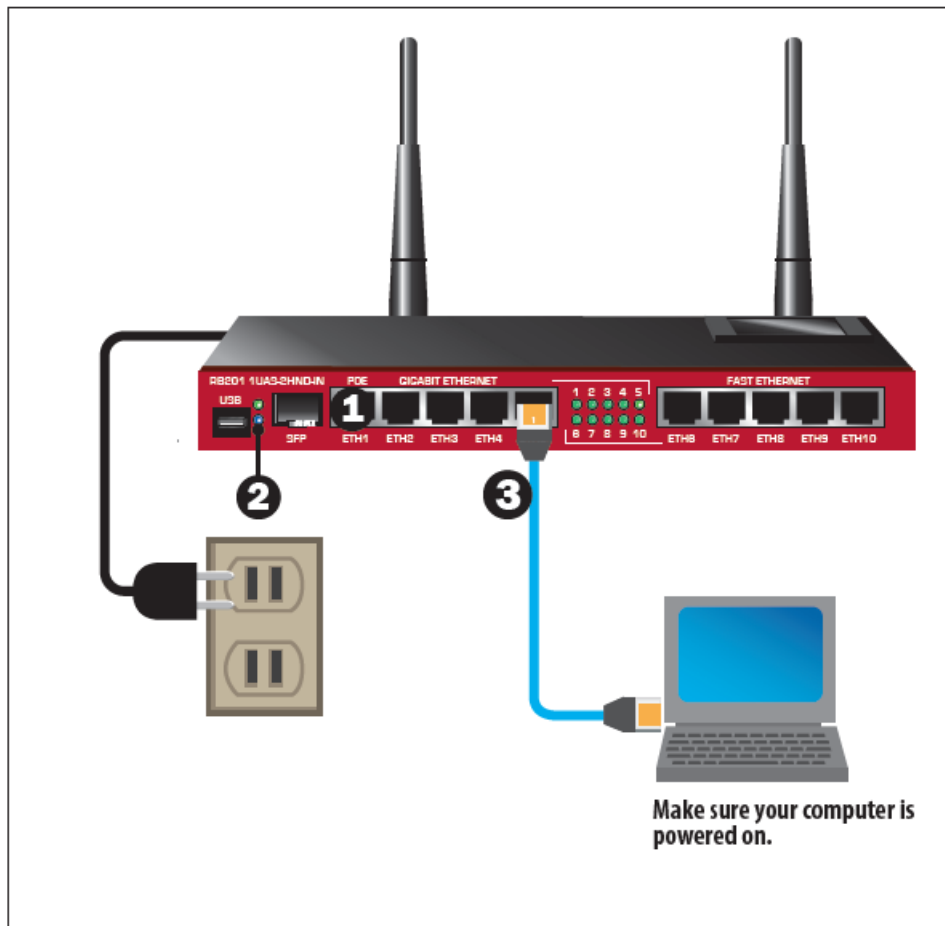
Note: DO NOT connect to the WAN Port 1 on the KE2 Smart Gate.

Note: DO NOT attempt to connect WIRELESSLY to the KE2 Smart Gate for Bootloader Firmware Updates, use a wired Cat5 connection only.

4. Confirm that you have the network link light active on your PC/laptop.

Note: it is advisable to run your laptop off of line power, not battery power, to prevent unwanted shutdown or sleep while the Bootloader Firmware Update is in process.

Ensure the wireless radio on the PC/laptop is turned OFF and that the KE2 Smart Gate is the device with an Ethernet connection.

KE2 Therm recommends temporarily disabling any firewall during the bootload process.

5. Your PC/laptop will get an IP address from the KE2 Smart Gate

6. Connect one end of an Ethernet cable to the controller, and the other end to an available Ethernet port on the KE2 Smart Gate.
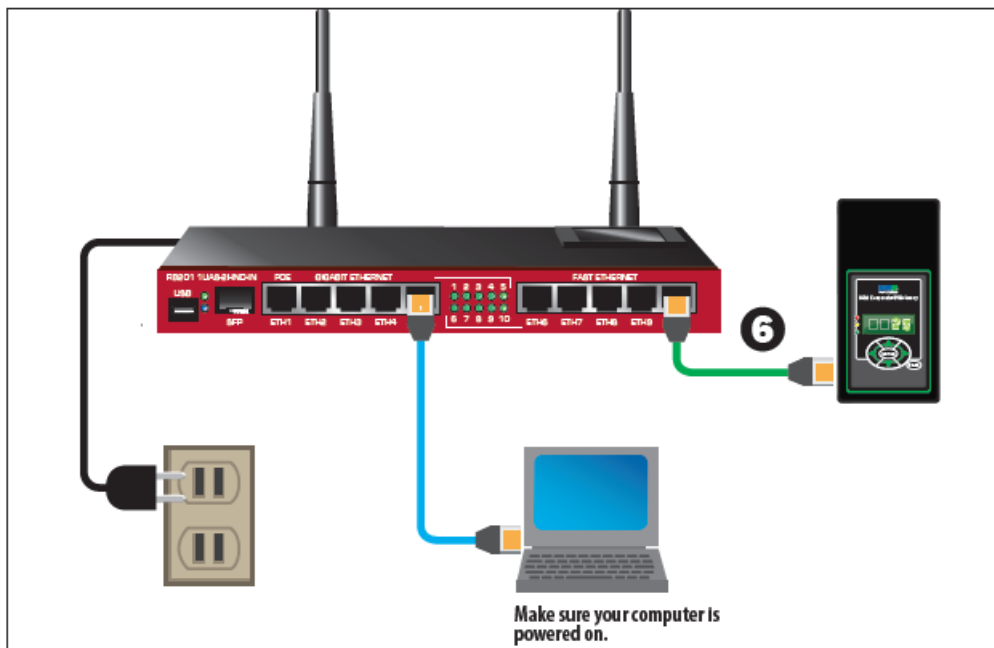
Note: DO NOT connect to the WAN Port 1 on the KE2 Smart Gate.

If the controller is already installed on a system, skip to step 8.

7. Connect power (120 or 208/240) to the controller if it is not already installed on a system.
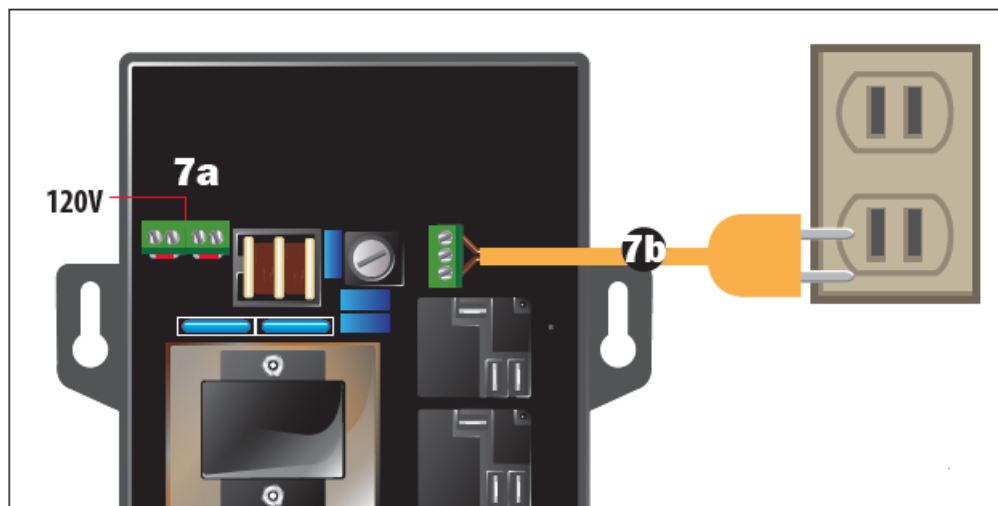
- 7a Verify the voltage jumper is set for 120V (default is 208/240).
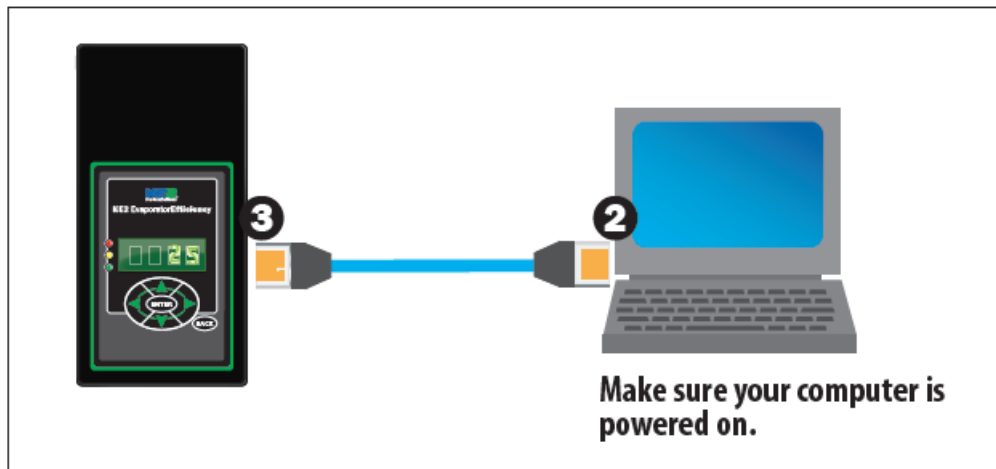- 7b Attach the power connector to the controller and the other end of the power cord into the wall socket.

8. confirm that the link lights are ON that correspond to the two ports you used on the KE2 Smart Gate.
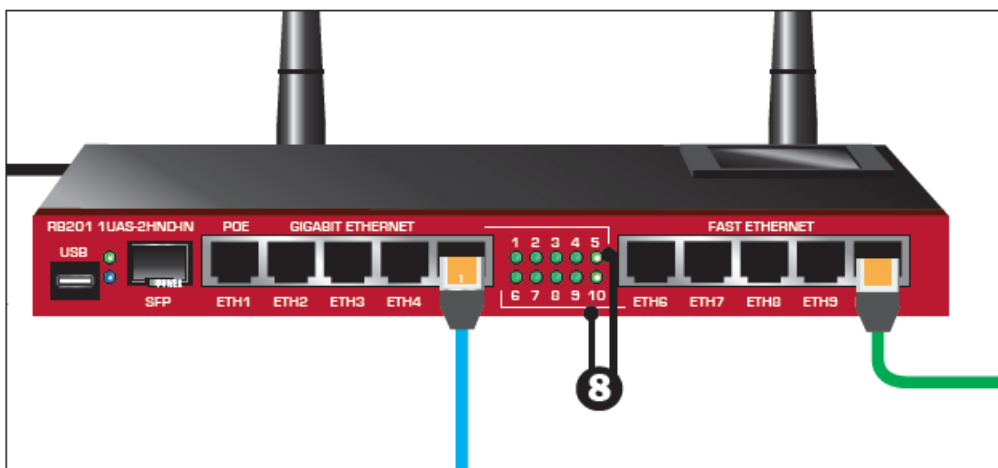
9. Go to Part 2.

Part 1B – Connecting a computer directly to the KE2 Evap

1. To connect directly to a controller, first set your computer's IP address to a static address by following the instructions in document Q.5.11 How to: Change to Static IP Address
2. Connect an Ethernet cable to your computer.
3. Connect the other end of the Ethernet cable to the controller's Ethernet port

Make sure your computer is powered on.

If the controller is already installed on a system, skip 4.
4. Connect power (120 or 208/240) to the controller if it is not already installed on a system
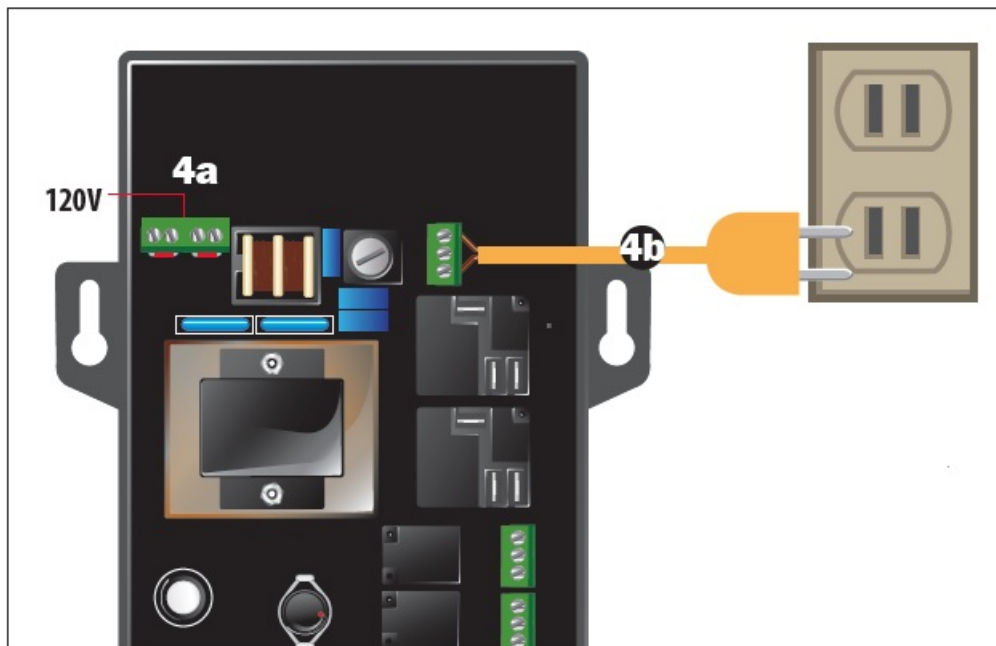
- Verify the voltage jumper is set for 120V (default is 208/240V).
- Attach the power connector to the controller and the other end of the power cord to the wall socket.
5. Verify the network link light is active on your PC where you plugged in the ethernet cable.

network link light
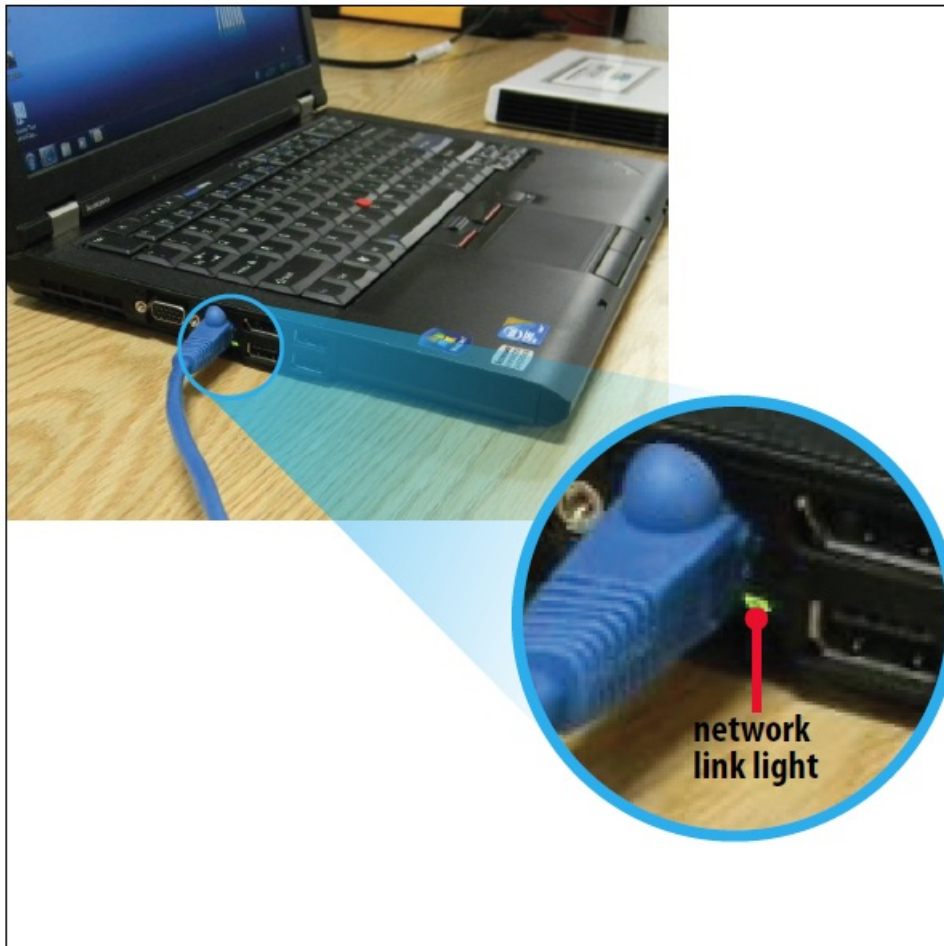
6. Go to Part 2.

Part 2 Turn on the controller

1. Note the preconfigured IP address on your controller
   NOTE: If the controller's IP address has been changed by the end-user, the new address must be used. The current IP address may be verified under the Variables menu on the front panel.
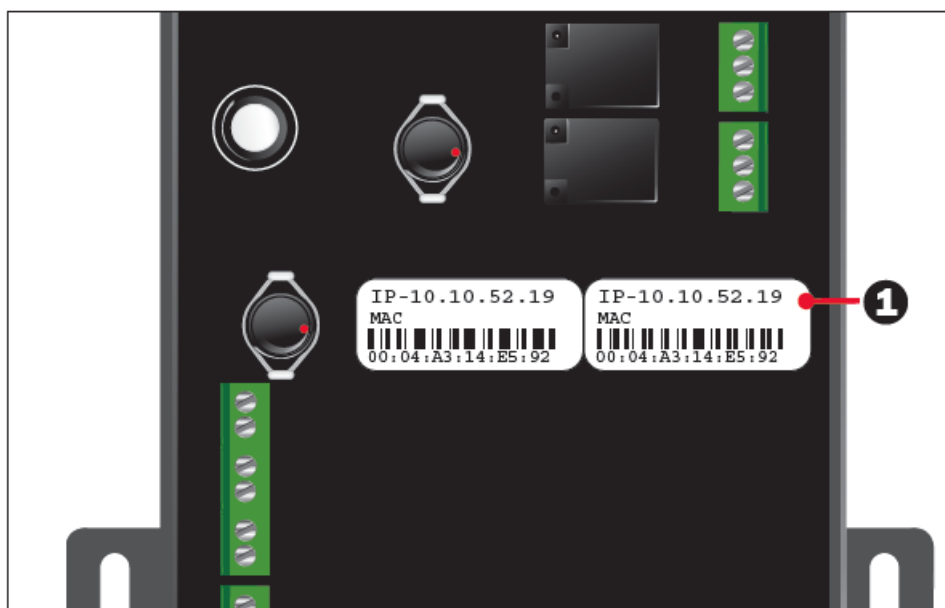
2. Open a web browser (e.g. Internet Explorer, Firefox) and enter the KE2 Evap IP address into the address bar. The main page of the controller will come up on the screen.
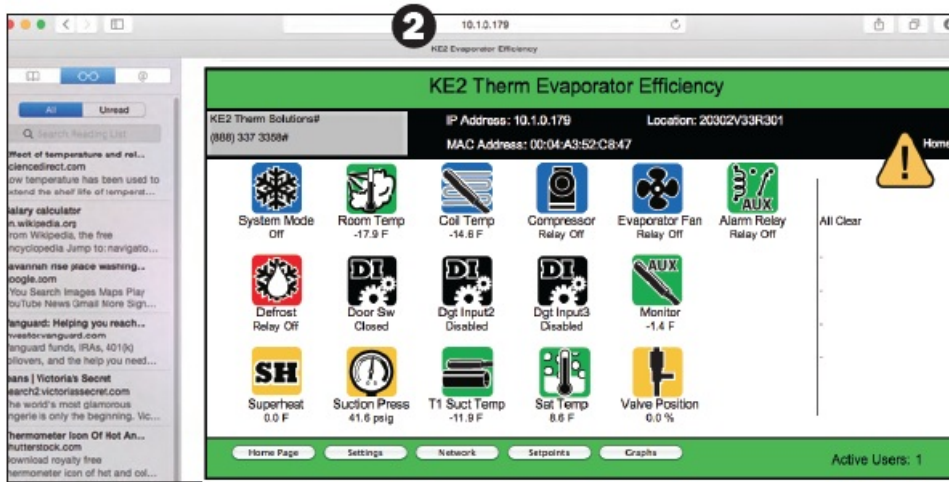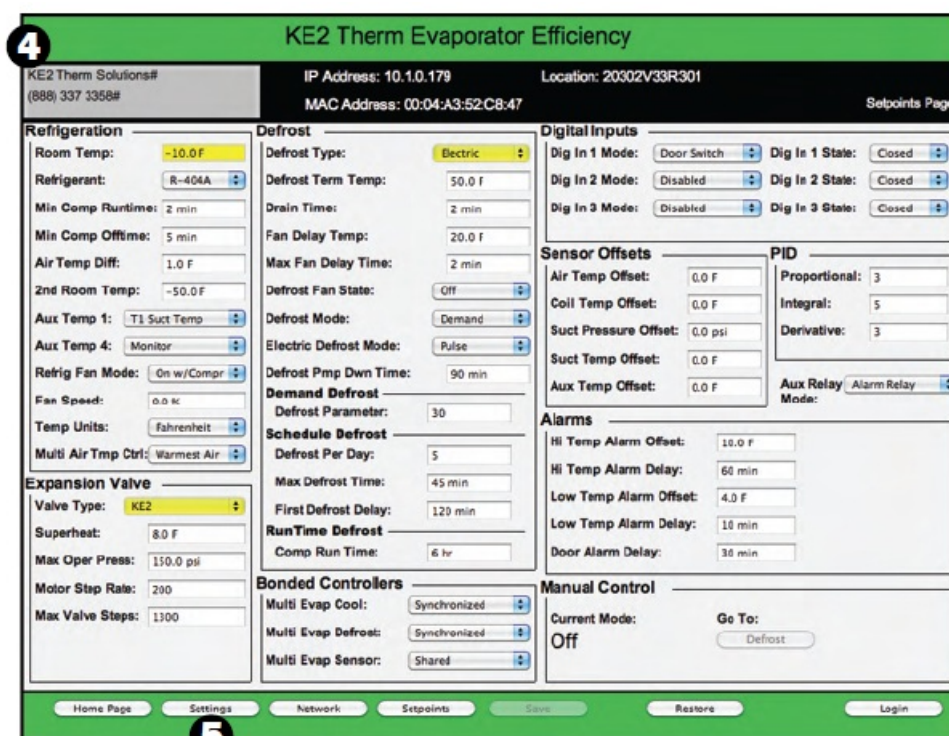
3. Click on Setpoints to view the current system setpoints.

4. To quickly re-program the controller after bootloading the new firmware, collect a screenshot of the Setpoints page and the Settings page.

These screens can be easily captured by pressing the ALT + PRTSC key on the computer and pasting this image into an MS Word document.

Do this for each screen you want to capture.

5. Click the Settings button.

6. Click Login to get to the password screen.

7. Type in Password and User Name. Version 3.3

   Default Password: ke2admin

   Default User Name: ke2admin

   Version 3.2 and Prior Default Password is 2222

   - 7a Press Enter or click the Submit button.

8. Note the current firmware revision number.

9. Click the Bootloader button, (Version 2.021 and older the button is labelled Flash.)
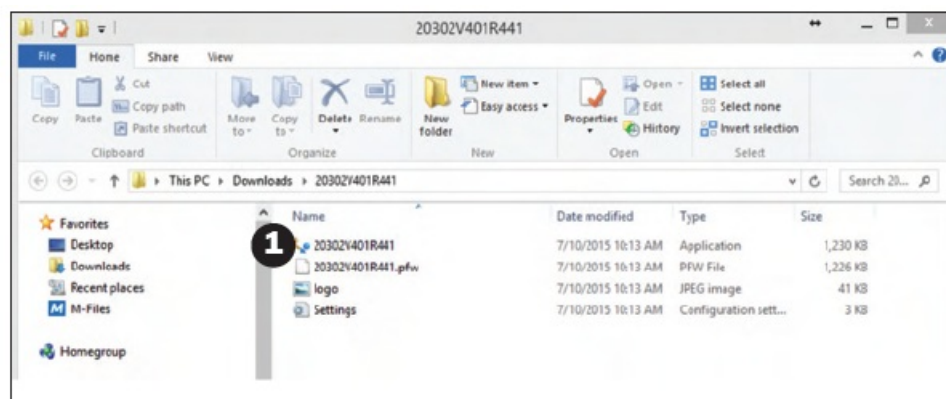
10. If a verification screen pops up, click on Yes

11. The controller will go to Bootloader Mode (on later firmware versions, the web page will display a red background and say the controller is in bootloader mode)
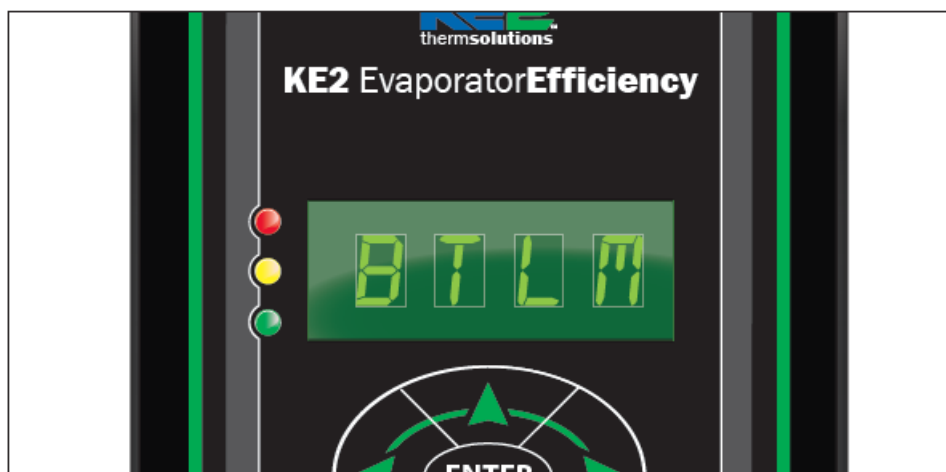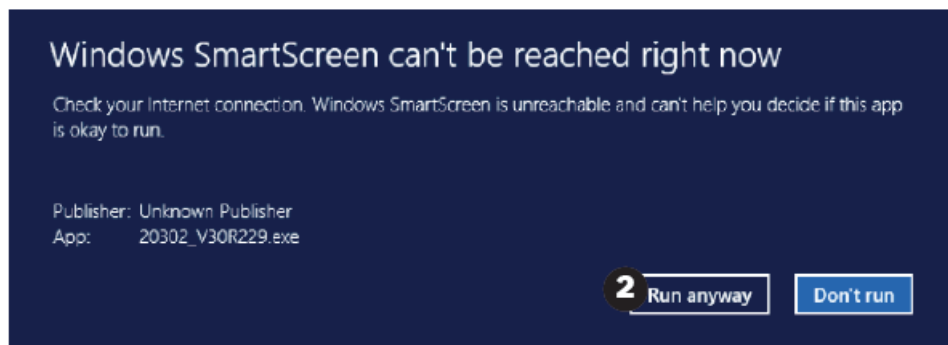

Part 3 Launch & Execute the Firmware Update Utility

1. Double-click to launch the Firmware Update Utility from the folder you created in the preliminary steps. Make sure you have the four files necessary to complete the update.


2. Windows 8 – Click Run anyway

Windows SmartScreen can't be reached right now

Check your Internet connection. Windows SmartScreen is unreachable and can't help you decide if this app is okay to run.

Publisher: Unknown Publisher
App: 20302_V30R229.exe

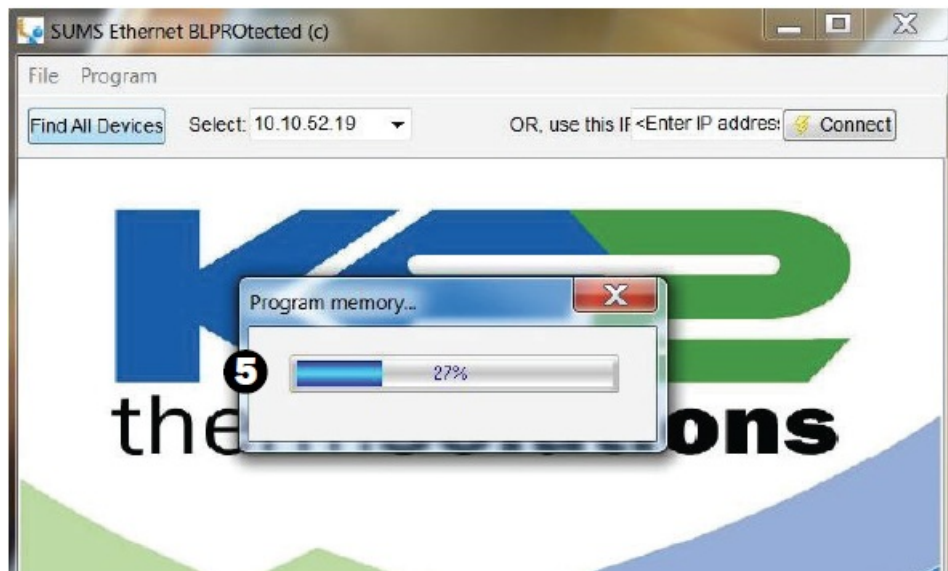**2** Run anyway   Don't run

3. Confirm that the Firmware Update Utility has located the controller, at the controller's preconfigured IP address.

   If you receive a message from your PC's firewall, make sure you allow it.

   If you receive a message that no controllers are in bootloader mode, press FIND ALL DEVICES.

4. Select PROGRAM/PROGRAM.
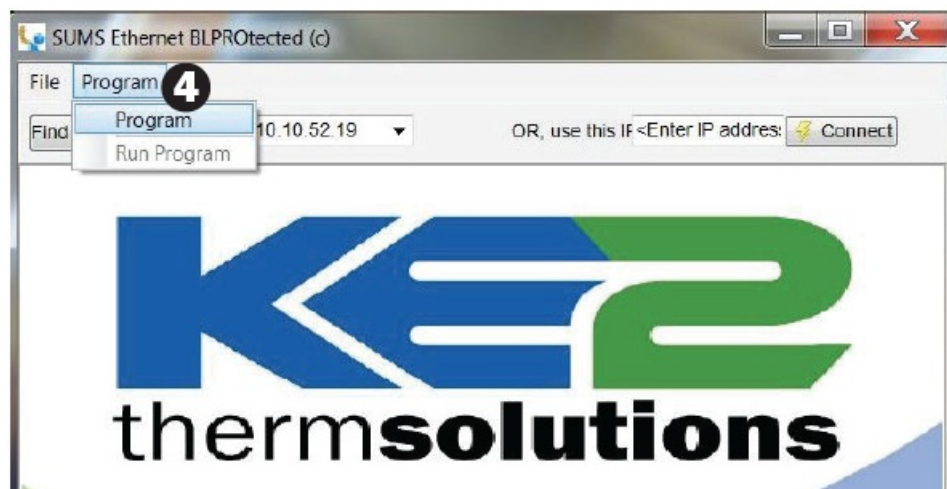
5. Observe the programming process.

6. Once the programming process has been completed, click OK

7. You will now see another message telling you Congratulations! Click OK again.

Part 4 Confirm the firmware update is installed properly

1. Refresh the web browser for the controller web page.

   Use Cntl + F5 to ensure web pages load correctly.

2. Using the screenshots collected from Part 2 Step 4, log in and change any values on the Setpoints and Settings pages that were changed to defaults during the bootload process.

Note: the controller will be in Intro mode after bootloading, the same as if you installed it for the first time. If no setpoints need to be changed, click Save on Setpoints to accept default values, and allow the controller to begin operating.

CONTACT

- KE2 Therm Solutions, Inc.
- 209 Lange Drive. Washington, MO 63090
- 1-888-337-3358 . **www.ke2therm.com**.

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Documents / Resources

KE2 KE2 Bootloader Guide [pdf] User Guide
KE2 Bootloader Guide, KE2, Bootloader Guide

References

- KE2Therm
- **User Manual**