

Connect a CTA-2045 Module to a Water Heater

For GE Water Heaters

Follow this step-by-step guide to connect your GE water heater to WatterSaver. If you have questions or need additional support, please contact support@watter-saver.com.

If you have not yet submitted a WatterSaver application, please visit watter-saver.com/signup to complete an application. You can skip Step 3 of the application (device connection). A WatterSaver representative will follow up with you. Make sure to have the make and model of your water heater available for your application.

How to set up the CTA-2045/EcoPort™ Universal Communication Module (UCM) for WatterSaver participation

Step One: Gather required equipment

The UCM set up requires:

1. Compatible GE water heater with a CTA-2045 port/EcoPort™
2. e-Radio UCM – provided by the WatterSaver program
3. Scissors capable of cutting plastic
4. Smartphone (optional)

Step Two: Install CTA-2045 port/EcoPort adapter and remove front cover

1. Your GE water heater will have a *CTA-2045 port/EcoPort adapter* (Illustration A) that connects to the water heater using an RJ45 cable. Confirm that the RJ45 cable is securely connected to both the adapter and the water heater control panel.

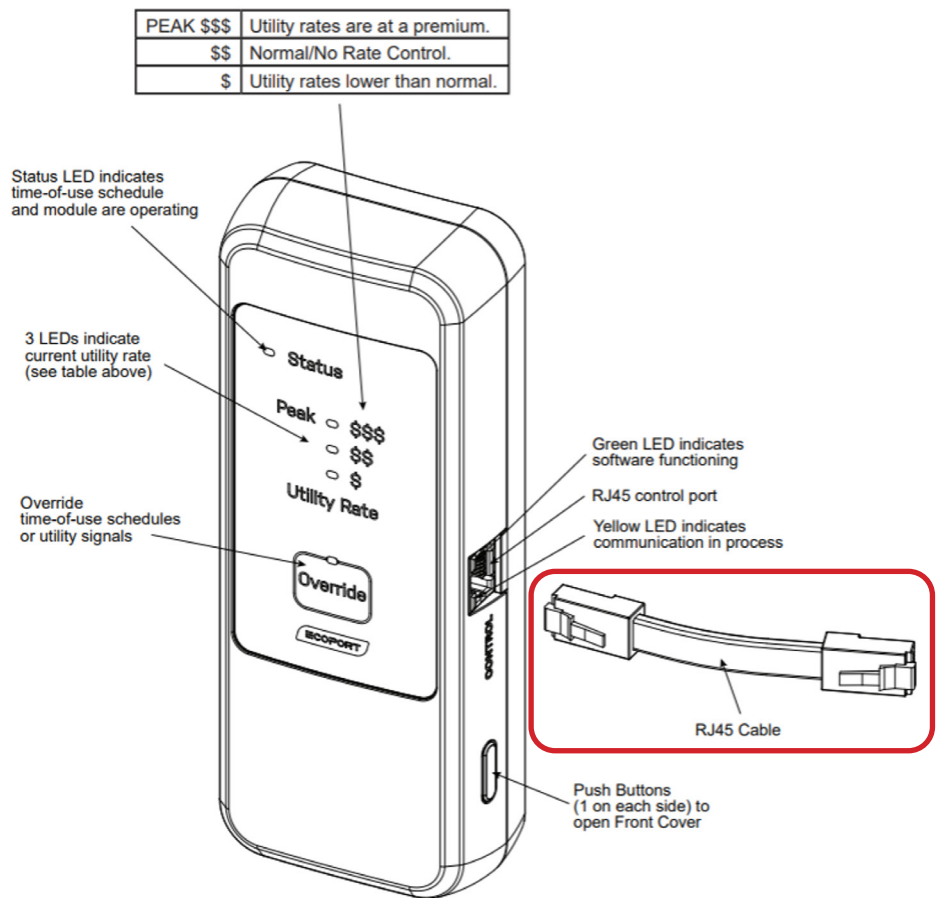


Illustration A

2. Remove the front cover of the CTA-2045 port/EcoPort adapter by pushing the side buttons, pulling the cover down, then pulling the cover face out (Illustration B).

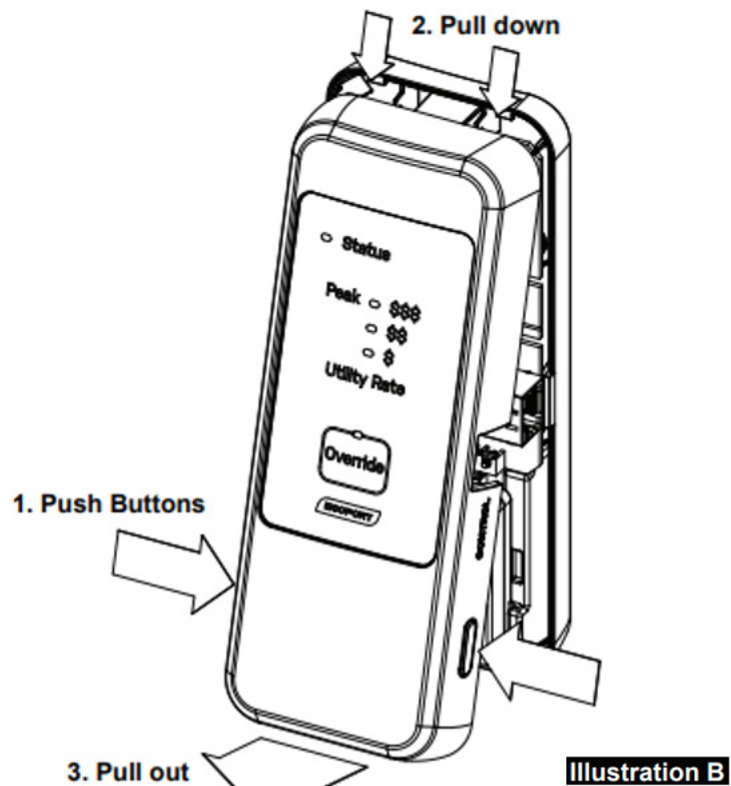


Illustration B

Step Three: Install the UCM

1. Plug the e-Radio UCM into the port at the bottom of the CTA-2045 port/EcoPort adapter (Illustration C). Do so by holding and pushing on the white plastic case of the UCM, not on the black antenna.*

WARNING! The connection of the black antenna to the UCM is delicate. **DO NOT** bend/rotate the black plastic antenna while holding the white plastic UCM case. The black antenna **MUST** be held at its **round base** with one hand while moving the longer part of the antenna (either to bend 90 degrees or to rotate) with the other hand. **DO NOT** use the black antenna to push the UCM into the CTA-2045 port/EcoPort – instead, use the white UCM case.

**The black plastic antenna is an LTE cellular antenna that will be used for communications between WatterSaver and your water heater. The white wire is an FM antenna, which is not necessary to participate in WatterSaver, so you can leave the white wire curled up.*

2. Remove the battery isolator pull tab to activate the battery and initiate the clock function (Illustration C).

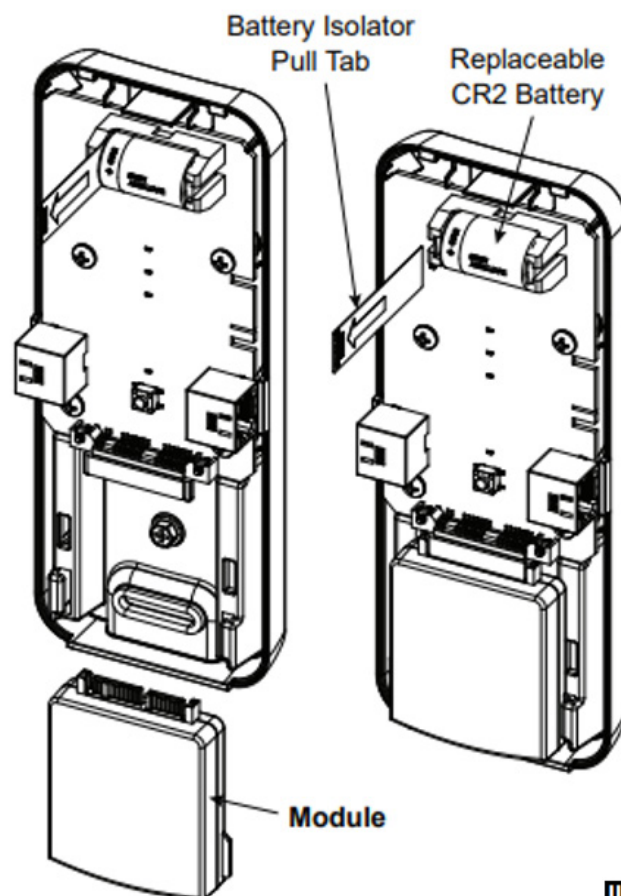


Illustration C

Step Four: Confirm UCM operation



GE water heater with UCM installed and the CTA-2045 port/EcoPort adapter front cover open. On the e-Radio UCM, Green LED means the UCM is powered on. Yellow LED shows cellular connectivity status.

1. After the UCM is plugged in, the green LED light on the UCM will flash for 20 seconds as the device powers up. It will continue AFTER the LTE cellular connection is complete, which is indicated by a solid yellow light.
2. Once you see the green LED come on, the middle LED light will flash yellow about once every 20 seconds. This indicates the LTE cellular connection is starting. The connection should succeed within one to two minutes; at this point, the LED will be solid yellow indicating a full connection to the e-Radio cloud via LTE. If you don't see the yellow LED flash or go solid, please wait 15 minutes before turning on and off your water heater or unplugging/re-plugging the UCM to restart the connection process.
3. The yellow LED may occasionally flash but then return to a solid light. If the unit becomes disconnected from the cellular network for more than 30 seconds, the yellow LED will turn off and then start reconnection attempts. This may result in more flash codes or the light may return to solid operation.

Troubleshooting UCM Error Codes

1. Yellow LED – Cellular Network Errors

The Yellow LED may flash between one and six times indicating various errors:

- a. One flash: Starting LTE cellular modem. This only happens during the initial UCM start up.
- b. Two flashes, then five second pause: Problem finding cellular network. This will begin a long, slow scan of three to five minutes.
- c. Three flashes, then five second pause: Detected cellular network, but problems connecting to the network. This could be due to a weak signal or slow registration.
- d. Four flashes, then five second pause: Internal SIM card error. *Please contact WatterSaver if this occurs.*
- e. Five flashes, then five second pause: Connected to the cellular network, but there is a problem connecting to the e-Radio cloud. This is usually a temporary error and the UCM will keep trying to connect.
- f. Six flashes, then five second pause: Cellular network problem, connection temporarily rejected.

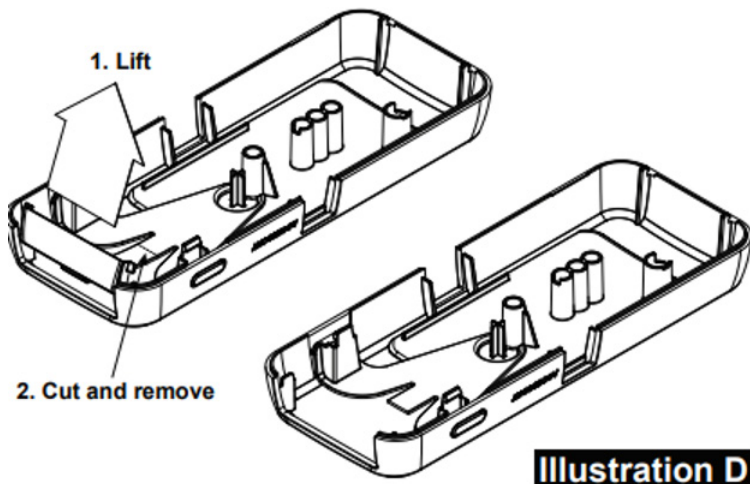
2. Red LED - Communication Errors with the Appliance

- a. If the Red LED flashes a few times, but the flashing does not last more than 30 seconds, this is usually a temporary error that will be resolved by the UCM retrying communication with the water heater.
- b. If the red LED flashes several times, flashes for more than a minute, or becomes solid red, the UCM may not be fully plugged in. It may also indicate a problem with the water heater, adapter, or the UCM. *Please contact WatterSaver if you see the red LED continuously flashing or solid on.*



Step Five: Replace CTA-2045 port/EcoPort adapter cover

1. Cut and remove the bottom portion of the CTA-2045 port/EcoPort adapter front cover (Illustration D)
2. Re-attach the front cover of the CTA-2045 port/EcoPort adapter.



GE water heater with UCM installed and the CTA-2045 port/EcoPort adapter front cover closed.

Step Six: Optional additional GE water heater functions

1. Download and connect to the SmartHQ™ App (Optional)
 - a. You can connect your water heater to GE's SmartHQ™ app to access features such as water temperature set point control and scheduling.
 - b. Visit your app store to download the GE SmartHQ™ app on your mobile device.
 - c. Follow the instructions in the SmartHQ™ app to connect your water heater.
2. Demand Response Override (Optional)
 - a. To override time-of-use schedules or utility signals, you can press the Override Button on the CTA-2045 port/EcoPort adapter front cover.
 - b. The "Override" LED will blink continuously to indicate that the override function is active. It will remain active for 24 hours or until the Override button is pressed again.

Thank you for your participation in WatterSaver. For more information, or for help with any questions, please contact us at support@watter-saver.com or 1-888-707-9930.