

# Connect a CTA-2045 Module to a Water Heater

For LG Water Heaters

Follow this step-by-step guide to connect your LG water heater to WatterSaver. If you have questions or need additional support, please contact [support@watter-saver.com](mailto:support@watter-saver.com).

**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 LG water heater with a CTA-2045 port/EcoPort™
2. e-Radio UCM — provided
3. Screwdrivers (Phillips)

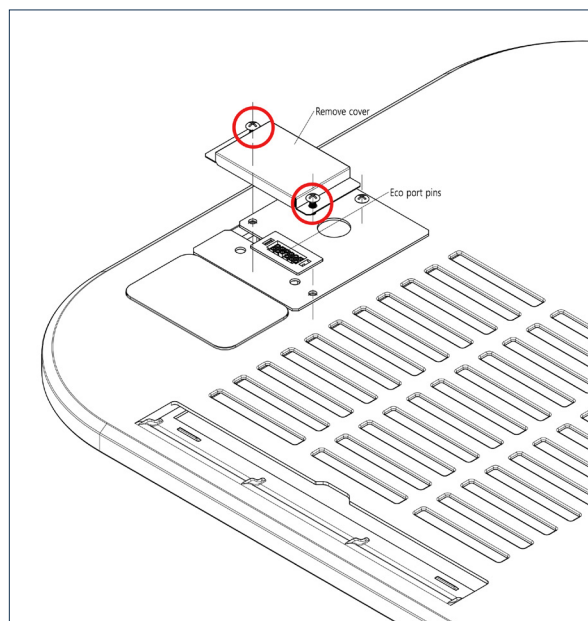
## Step Two: Turn Off Power to Your Water Heater

1. **WARNING:** Before continuing with UCM connection, turn off power to your water heater at the circuit breaker or fuse box by flipping the breaker supplying power to your water heater to the OFF position or by removing the fuse.

**WARNING!** WORKING ON AN ENERGIZED CIRCUIT CAN RESULT IN SEVERE INJURY OR DEATH FROM ELECTRICAL SHOCK. TURN POWER OFF BEFORE PERFORMING THIS INSTALLATION. CHECK WIRE WITH A NON-CONTACT CIRCUIT TESTER TO MAKE SURE POWER IS OFF.

## Step Three: Remove the CTA-2045/EcoPort™ Port Cover

1. Unscrew the CTA-2045/EcoPort™ Port cover located on top of your water heater. This will expose the EcoPort™.



## Step Four: Install the UCM

1. Plug the UCM into the CTA-2045/EcoPort™ port receiver socket by aligning the UCM connectors with the connectors of the CTA-2045/EcoPort™. Gently push in the UCM until the bottom face of the UCM touches the flat face of the receiver.
2. In most cases, the screw sockets on the UCM will align with the screw sockets on the CTA-2045/EcoPort™. If this is the case use the screws to secure the UCM to the receiver.
3. Attach the black LTE antenna to the small metal threaded connector on the side of the UCM by twisting it on until just finger tight. Make sure it is straight.
4. Point the LTE antenna up and away from the water heater. Based on your water heater configuration you may need to bend the antenna up or rotate it away from the water heater. Be careful when doing so.

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

## Step Five: Turn the Power Back On and Confirm UCM Operation

1. Turn on the power to your water heater at the circuit breaker or fuse box by flipping the breaker supplying power to your water heater to the ON position or by replacing the fuse. After plugging in the UCM, it should be automatically enabled.
2. After installation, the UCM LED indicator light should turn on and be green when the power is turned on. After about 20 seconds, it will start flashing blue while connecting to the cellular network. After about 30 seconds, the LED should stop flashing and remain blue.
3. The UCM is now successfully connected to the cellular network and transmitting and receiving data. If the UCM LED is not solid blue, try the troubleshooting steps below.

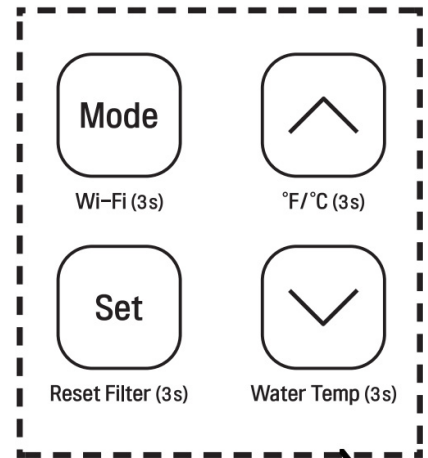
## Troubleshooting UCM Error Codes

1. Blue flashing means there is a cellular connection issue.
  - a. Two blue flashes then a five second delay: cellular network is congested. This should resolve automatically within 1-2 minutes.
  - b. More than 1 minute: Verify that the CTA-2045 UCM is firmly pushed in to the port. Try uninstalling and re-installing the UCM (Step Five) to confirm this. Shut off power to the water heater before proceeding with Step Four.
  - c. Four blue flashes then a five second delay: internal SIM card not detected. Contact WatterSaver to exchange the UCM.
  - d. Five blue flashes, then a five second delay: connected to cellular network but not getting responses. This should resolve automatically within 1-2 minutes.
  - e. Six blue flashes, then a five second delay: module has been rejected from cellular network. At the circuit breaker or fuse box, shut off the power to your water heater for about five minutes, then turn the power back on. This should solve the issue.

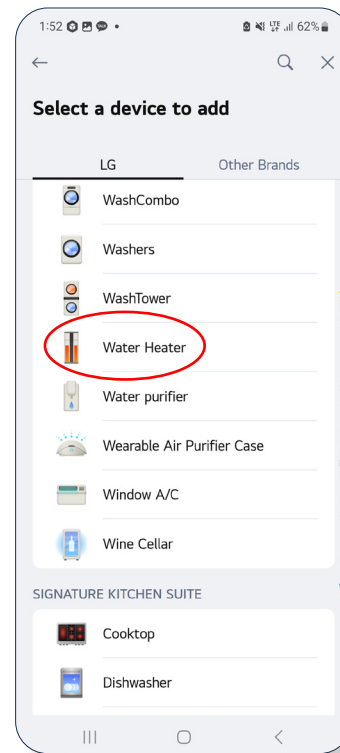
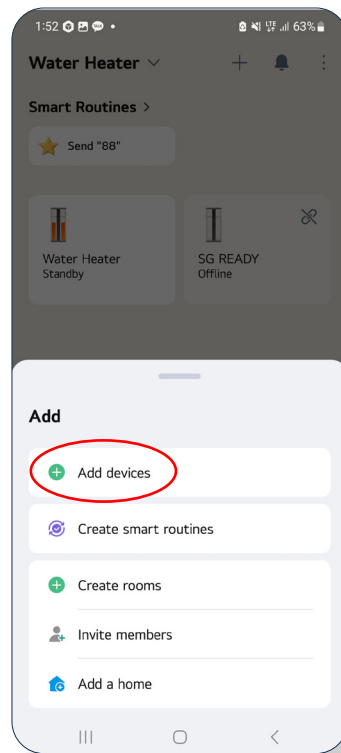
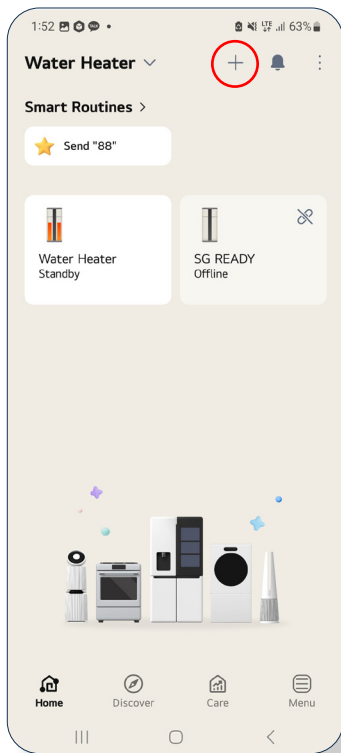
2. Red flashing means there is a communication issue with the water heater.
  - a. Less than 1 minute: temporary communication error.
  - b. More than 1 minute: Verify that the CTA-2045 UCM is firmly pushed in to the port. Try uninstalling and re-installing the UCM (Step Four) to confirm this. Shut off power to the water heater before proceeding with Step Four.

### Step Six (if not already done): Set Up LG ThinQ app

1. Download the LG ThinQ app from your phone's app store.
2. Create an account or connect to your existing account.
3. On your water heater press and hold the "Mode" button for 3 seconds. This allows your water heater to be discovered.
4. On the ThinQ app home screen press the "+" button at the top right of the screen and select "Add devices"
5. Select "Water Heater" as the type of device to connect.
6. Follow the onscreen instructions to complete the connection and setup of your water heater on the ThinQ app.



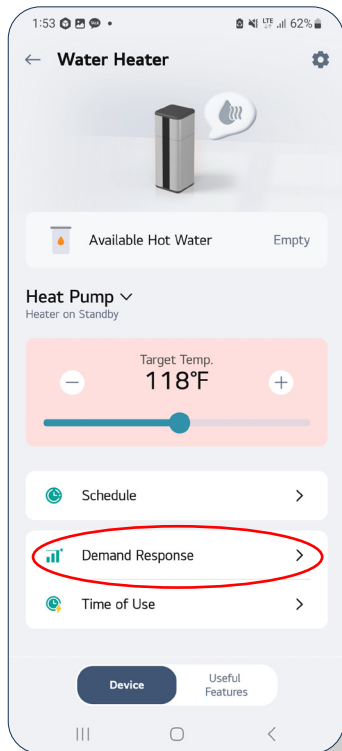
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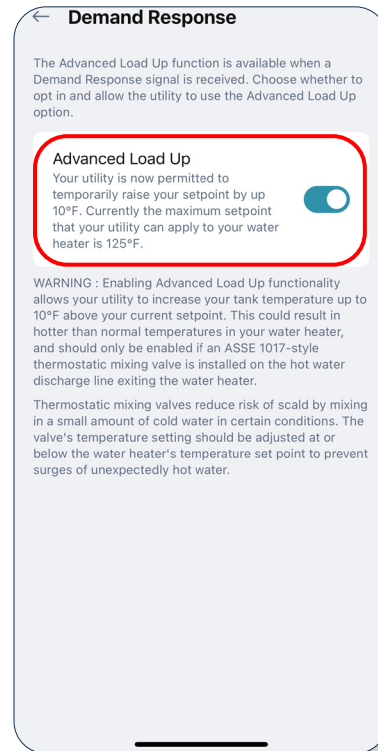
## Step Seven (optional): Enabling Advanced Load Up (ALU) via the ThinQ app

Follow this step only if a Thermostatic Mixing Valve is present on your installation.

1. On the ThinQ app select your water heater.
2. Scroll down and select the Demand Response button.
3. Press the button to turn Advanced Load Up ON.



The above image is illustrating step 2



The above image is illustrating step 3

## Step Eight: Connect Your Water Heater to WatterSaver

Please email [support@watter-saver.com](mailto:support@watter-saver.com) to let the support team know that your UCM is installed and that you are ready to participate in WatterSaver.