



TOTAL CONTROL

**CARRIER INFINITY
INTEGRATION GUIDE**



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INTEGRATION GUIDE**



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Overview

URC's **Carrier Infinity** two-way module **provides control and feedback** to Carrier climate control systems. This module also provides **macro integration** via **Two-way Module Commands** and **automation capabilities** via **Device Events**.



Requirements

- The Carrier Infinity system must be **fully configured and operational** prior to being integrated with Total Control.
- Configure the **Infinity device** to a **permanent IP address** using a **static IP address** or a **DHCP/MAC Reservation** within the system's local router.
- Ensure that the .TCM3 module has been **downloaded and imported** onto the programming computer.

For more information on how to import a two-way module, please refer to the [Working with Two-way Modules](#) document.



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General Information

Module: Carrier Infinity

Developer: URC

File Type: *.tcm3

Communication: IP

Category: Aux

Module Type: Core

Multiple Module Support: No

Unified: No

URC Compatibility: Flex 2 & Accelerator 3

Device Events: Yes

Two-way Module Commands: Yes

TOTAL CONTROL

Adding & Configuring the Module

TCM files are found on the [URC Dealer Portal](#). Once you have downloaded and imported the file, perform the following steps to add the module to a project:

This module can be added to any new or existing Total Control system.

Adding the [Core]

Unified Modules utilize a **[Core]** module. Access to the supported modules are provided from the **Unified Modules - Room Selection** window. One core should be added for each Carrier system.

Step 4: Add Other Devices



1. Select **a room** for the core to be added to.
2. Select **My Database**.
3. Select **IP Database**.
4. Select **Aux** category.
5. Select **Carrier** from the brand list.
6. Select **Infinity System Control [Core]** from the model list.
7. Select **Add Selected Modules** to add it to the project.



For more information on two-way modules, what they are, where to find them, and how to import them, please review [this guide](#).

| 7 a.Add Selected Modules | b.Create New Driver | c.Test |
|---|---|--|
| 1.Select Room : <input style="outline: 2px solid orange; border-radius: 5px; width: 150px; height: 25px; border: 1px solid #ccc; padding: 5px;" type="text" value="Control Rack"/> 1 | 5.Select Brand : <input style="outline: 2px solid orange; border-radius: 5px; width: 150px; height: 25px; border: 1px solid #ccc; padding: 5px;" type="text" value="CARRIER"/> 5 | 6.Select Model : <input style="outline: 2px solid orange; border-radius: 5px; width: 150px; height: 25px; border: 1px solid #ccc; padding: 5px;" type="text" value="INFINITY SYSTEM CONTROL [Core]"/> 6 |
| 2.Select Database : <input checked="" type="radio"/> URC <input checked="" type="radio"/> My 2 | 3.Select Module Type : <input style="outline: 2px solid orange; border-radius: 5px; width: 150px; height: 25px; border: 1px solid #ccc; padding: 5px;" type="text" value="IP Database"/> 3 | 4.Select Category : <input style="outline: 2px solid orange; border-radius: 5px; width: 150px; height: 25px; border: 1px solid #ccc; padding: 5px;" type="text" value="AUX"/> 4 |

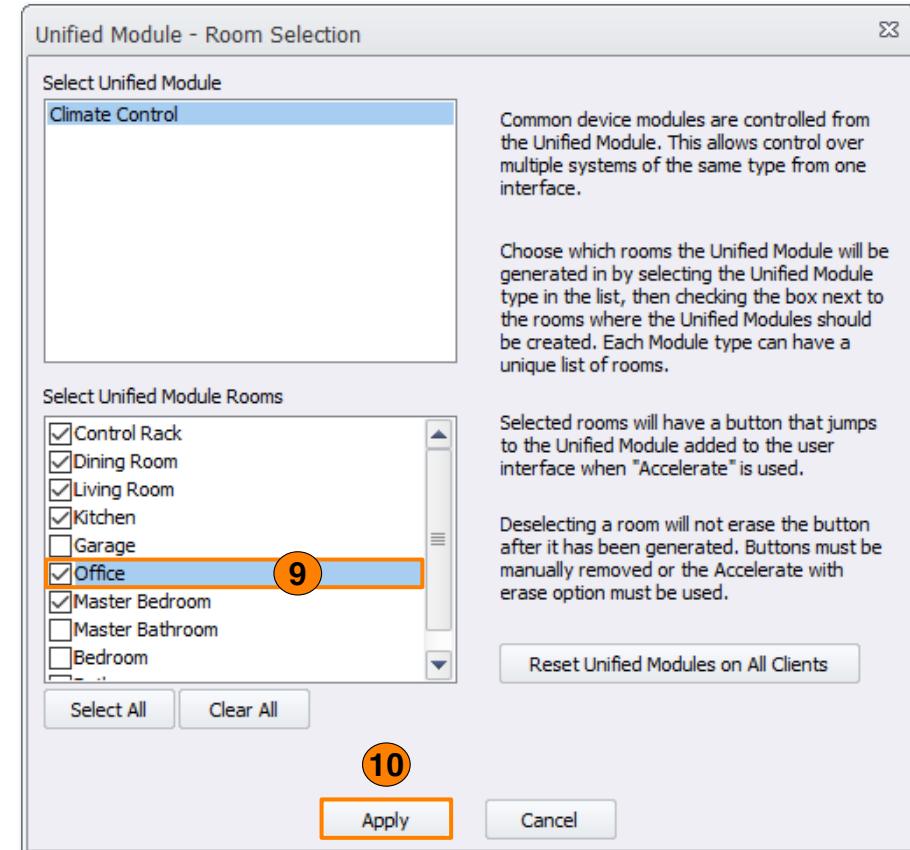


Choose which room in the system to place the module. This two-way device **requires a single (1) Core module** in the system. It is a best practice to place the Core module into a room labeled "**Core**". This room can be hidden later from the **Room Properties** menu.

8. The **Unified Module - Room Selection** window pops up. This window is asking what rooms to provide access to the unified module.
9. Select rooms for the **Climate Control** to be displayed in.
10. Select **Apply**.



If needed, this can
be modified later in the
Step 7: Properties Manager.



Step 6: Network Setup

1. Select **Non URC Device**.
2. Enter the **IP Address** of the **Carrier device**.
3. Leave the **Port** as is.

| Room | Device | IP Address | Port |
|--------------|--------|----------------|------|
| Control Rack | Power | 192.168.18.5 | 80 |
| Control Rack | NVR | 192.168.18.130 | 80 |
| Control Rack | AVR | 192.168.18.161 | 23 |
| Control Rack | KNX | 192.168.18.199 | 0 |
| Office | TV | 192.168.5.75 | 80 |



It is **required** that the **Carrier Infinity** have a **permanent IP address** when integrated with Total Control. A **static IP address** may be configured, or a **MAC/DHCP reservation** may be assigned from within the router.

Step 11: Edit User Interfaces**1. Select Accelerate!**

a. Generate Menus & Devices **b. Edit Menus by Room** **c. Edit Device Layouts**

Submenu System Options

Included Submenus

| | | |
|---------------------|--------------------------------------|-------------------------------------|
| Entertainment : | <input checked="" type="radio"/> Yes | <input type="radio"/> No |
| Music : | <input checked="" type="radio"/> Yes | <input type="radio"/> No |
| Lights : | <input type="radio"/> Yes | <input checked="" type="radio"/> No |
| Comfort : | <input type="radio"/> Yes | <input checked="" type="radio"/> No |
| Security : | <input type="radio"/> Yes | <input checked="" type="radio"/> No |
| Info : | <input type="radio"/> Yes | <input checked="" type="radio"/> No |
| Settings : | <input checked="" type="radio"/> Yes | <input type="radio"/> No |
| Multiple Displays : | <input checked="" type="radio"/> Yes | <input type="radio"/> No |
| Timer : | <input type="radio"/> Yes | <input checked="" type="radio"/> No |

Submenus are only created if there will be buttons present. Empty submenus are not generated.

If a submenu is set "No", any button that would normally be there will instead be generated on the main menu.

Timers Items

Select an item and a jump to it will be created in the appropriate menu for each room

- Sleep Timer
- Event Timer
- Alarm Clock
- Vacation Mode

Choose the setup options for the User Interfaces in the system. When ready press the Accelerate Button

Accelerate! 1

Music Menu Options

Use dedicated Multi-Room Music submenu

This option will create a dedicated sub menu for the URC Audio Multi-Room Music available to a room, as well as a Music submenu for local music sources available only to that room.

Edits made to this URC Audio submenu are duplicated in every room's URC Audio submenu; this should reduce the time spent editing this unique submenu.

However it is NOT possible to remove a URC Audio source from the submenu, or add a non-URC Audio source to the submenu.

Use combined Music submenu

This option will create a single Music submenu in all applicable rooms. This submenu will contain both URC Audio sources AND local sources available to that room.

Edits must be made on a per-room basis. There are no GLOBAL changes.



By default, buttons to access the **Climate Control** module are placed on the **Main Menu**.

This button can be relocated to a different page or sub-menu by **dragging-n-dropping** it into the desired location.

Keep in mind, if the system is Accelerated with the **ERASE** option, this button **returns to its original position** on the Main Menu.

a. Generate Menus & Devices **b. Edit Menus by Room** **c. Edit Device Layouts**

Main Menu Pages

1. Selected Room : Office

2. Select View : TC Model

Page 1

| | | |
|------------|--------|-------------------|
| Entertainm | Music | Climate Co |
| Scenes Cor | Shades | Lighting Cr |

Page 2

| | | |
|--------|----------|------------|
| NVR | Settings | Sleep Time |
| Hidden | Hidden | Hidden |

Hide Main Menu Hide Main Menu

Previous Page Next Page

Step 12: Macro Editing



1. Select **Accelerate!**
2. Make additional programming changes as needed within the remaining steps. Once completed, save the project and **Download** to the system.

The screenshot shows the 'Macro Programming Options' dialog box. At the top, there are five tabs: a. Auto Macro Generation (selected), b. Macro By Room, c. Special Macros, d. Automation Macros, and e. TKP-100 Macros. The 'Macro Acceleration Options' section contains two radio button options:

- Preserve user edited macros while generating macros.

This option will not erase and generate new versions of macros that appear to have been previously edited. Other macros will be erased regenerated.
Universal Macros will not be affected.
- ERASE ALL existing macros and create new ones using these options.

This will erase all existing macros, including those on the main menu and device layout pages of the user interfaces.
Universal Macros will not be affected.

The 'TV Off Command' section contains two radio button options:

- TV Device Power OFF command is generated only for the ROOM OFF macro
- TV Device Power OFF command is generated for ROOM OFF and MUSIC macros

The 'Source Device Power' section contains two radio button options:

- Devices are turned ON when needed and turned OFF only when a ROOM OFF command is issued.
- Devices are turned ON as needed and turned OFF when NOT NEEDED, or a ROOM OFF commands is issued.

To the right of the dialog box, a note says: 'Choose the setup options for auto generation of macros in the system. When ready press the accelerate button'. Below the dialog box is a button labeled 'Accelerate!' with a circled '1' next to it.

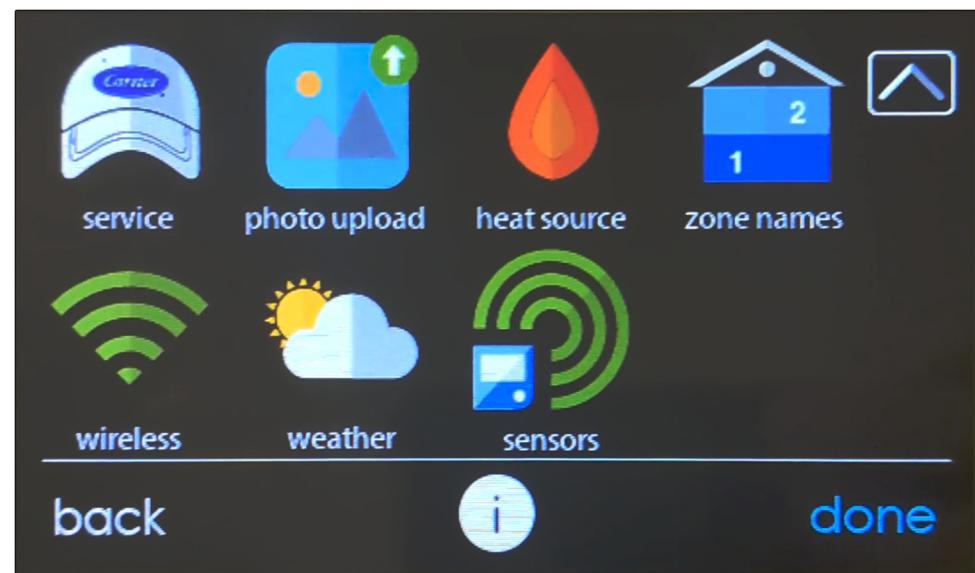
Device Serial Numbers

All two-way commands require the **serial number** of the Carrier Infinity device in order to function properly. This information can be found using any wall mounted thermostat. While using a thermostat, perform the following:

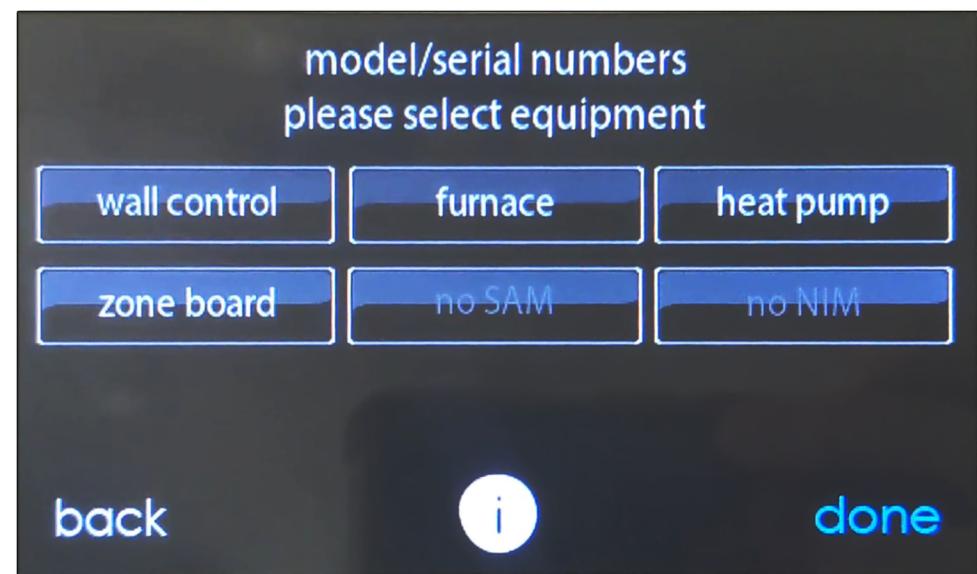
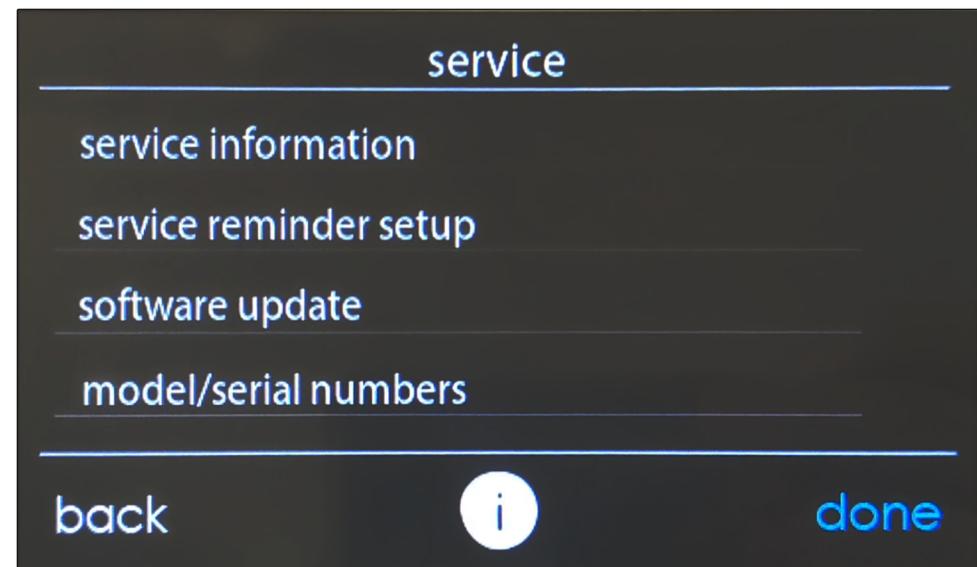
1. Select **Menu**.
2. Scroll down to the second page of the **Menu**. Select **Service**.



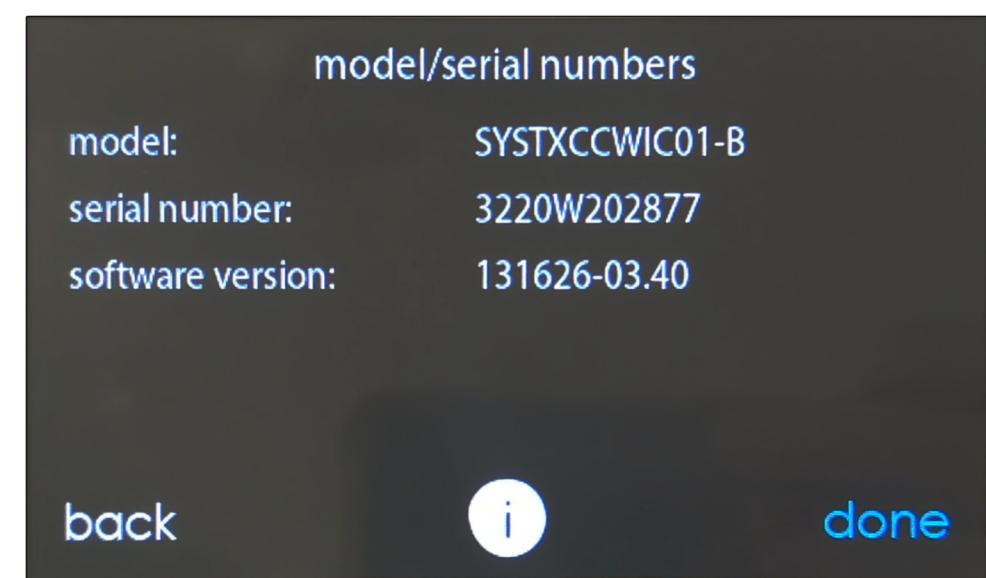
For **more information** on Carrier systems, please visit the Infinity Touch **account website** at <https://myinfinitytouch.carrier.com/account> for **individual devices**, their **locations**, and **serial numbers**. Selecting the "i" icon on a device UI shows the same information for that **specific device**.



3. Select **Model/Serial Numbers**.
4. Select **Wall Control**.



5. The thermostat displays the serial number **required** for all **two-way commands** and **device events**.

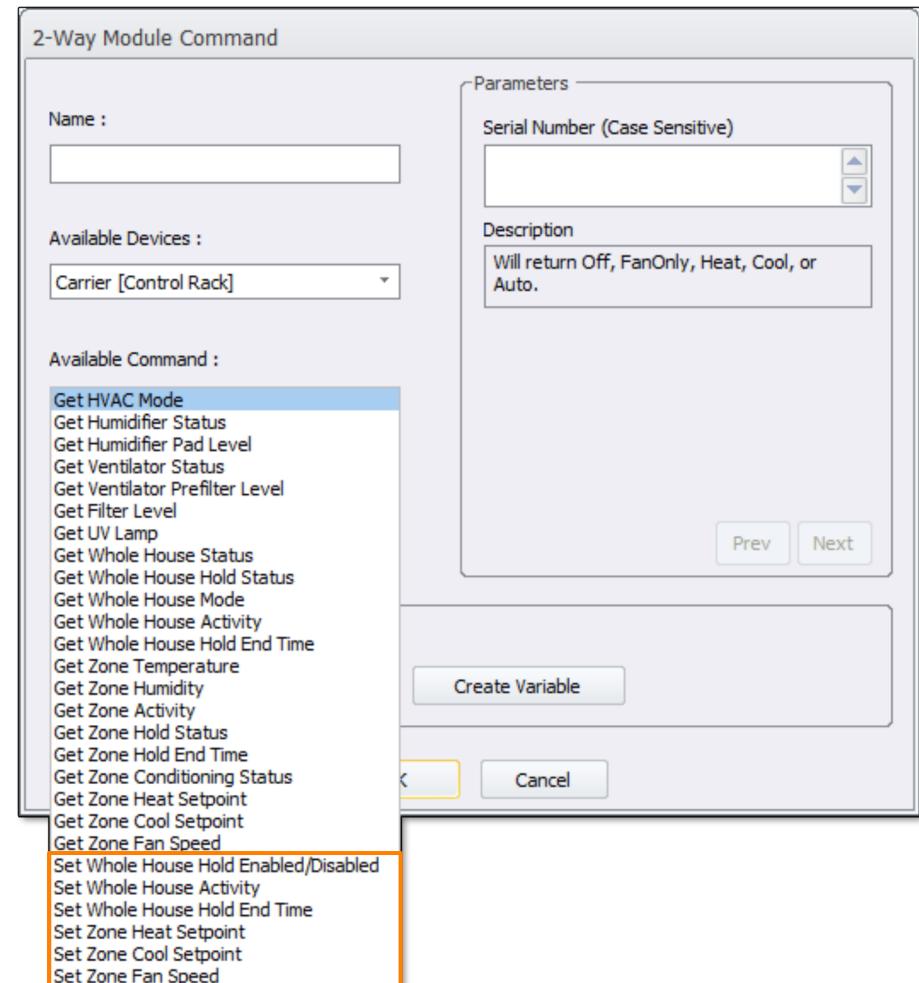


Two-way Module Commands

Two-way module commands are special functions that are derived from the two-way module, and are the only way to send discrete commands to the Carrier system.

Before creating a macro, ensure the **correct device** has been selected from the **Available Devices list**.

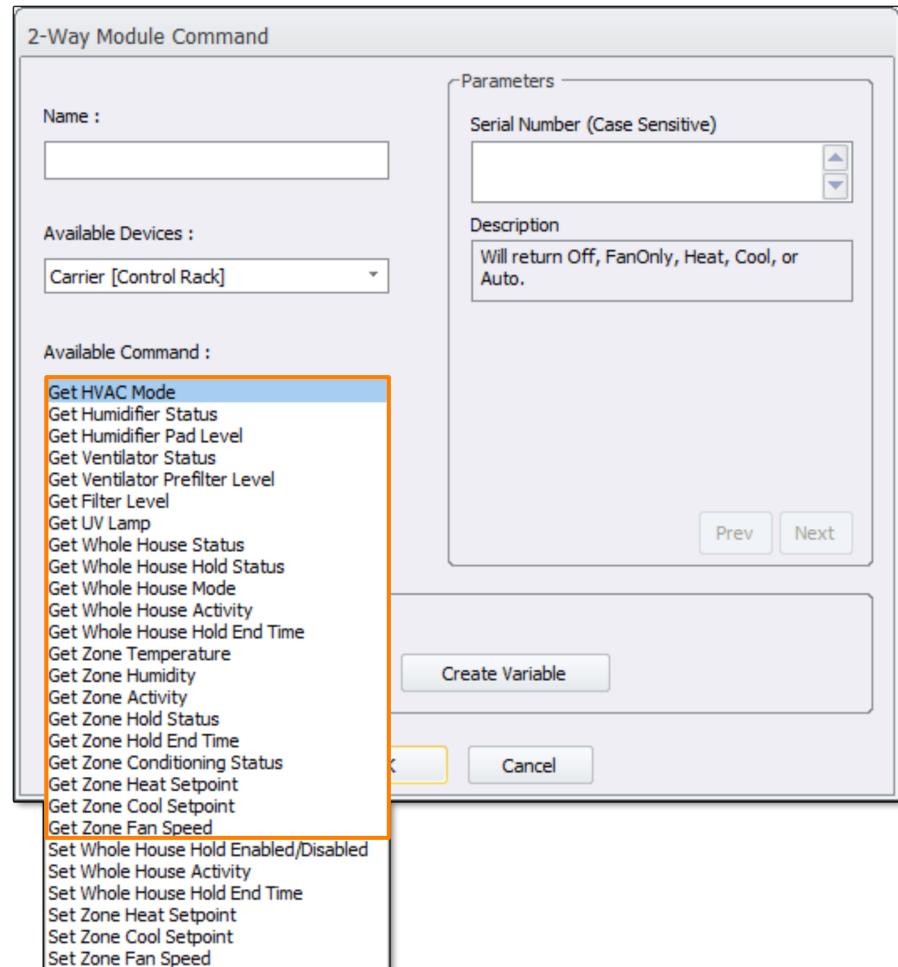
- **Set Whole House Hold:** Sets whether the hold is **enabled** or **disabled**.
- **Set Whole House Activity:** Sets the **current** house activity.
 - **Home:** Sets the **current** house activity to **Home**.
 - **Away:** Sets the **current** house activity to **Away**.
 - **Sleep:** Sets the **current** house activity to **Sleep**.
 - **Wake:** Sets the **current** house activity to **Wake**.
 - **Manual:** Sets the **current** house activity to **Manual**.
- **Set Whole House Hold End Time:** Sets the **end time** for a hold using a **24-hour** format.
- **Set Zone Heat Setpoint:** Sets the heat setpoint for a **specified** zone.
- **Set Zone Cool Setpoint:** Sets the cool setpoint for a **specified** zone.
- **Set Zone Fan Speed:** Sets the fan speed for a **specified** zone.
 - **Off:** Sets the fan speed to **Off**.
 - **Low:** Sets the fan speed to **Low**.
 - **Med:** Sets the fan speed to **Medium**.
 - **High:** Sets the fan speed to **High**.



Query Commands

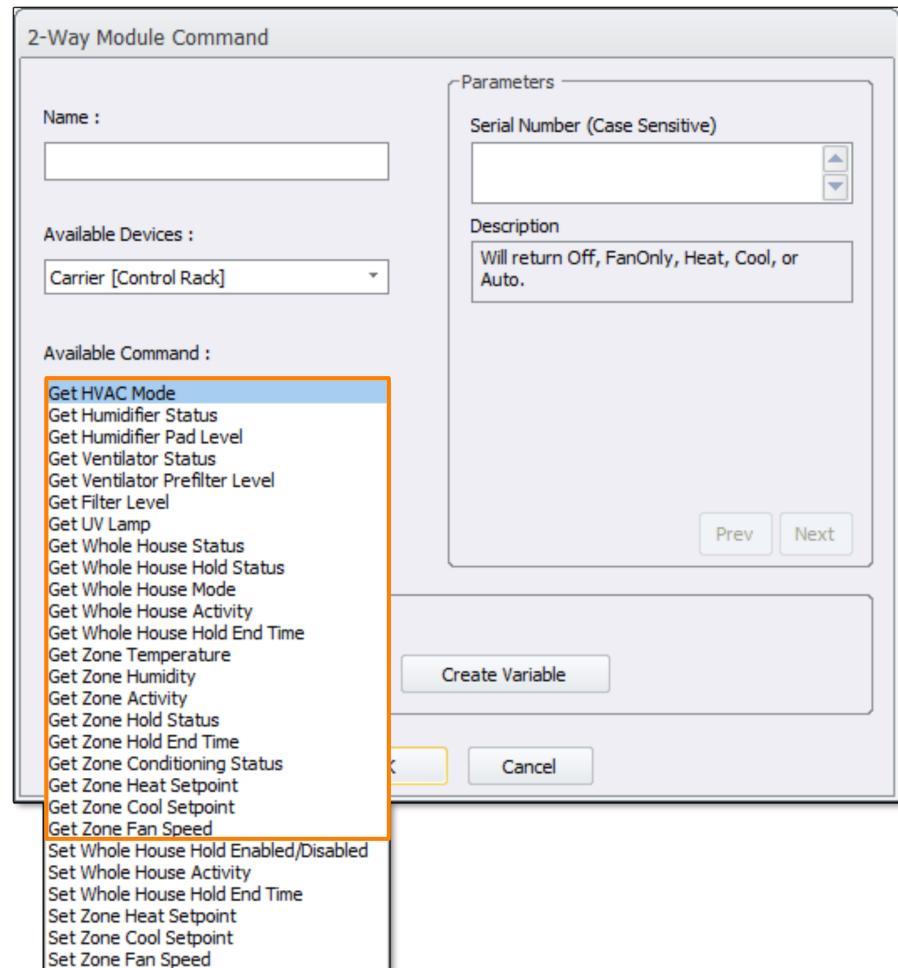
Query commands allow the Total Control system to ask a device for information. This information can be saved as a variable, allowing for advanced macro creation based on conditional logic.

- **Get HVAC Mode:** Reads the **current** HVAC mode. [Off | Fan Only | Heat | Cool | Auto]
- **Get Humidifier Status:** Reads the **current** humidifier status. [Off | On]
- **Get Humidifier Pad Level:** Reads the **current** humidifier pad level. [0 -100]
- **Get Ventilator Status:** Reads the **current** ventilator status. [Off | On]
- **Get Ventilator Prefilter Level:** Reads the **current** ventilator prefilter level. [0 - 100]
- **Get Filter Level:** Reads the **current** filter level. [0 - 100]
- **Get UV Lamp:** Reads the **current** light level. [0 - 100]
- **Get Whole House Status:** Reads the **current** whole house status. [Returns a string]
- **Get Whole House Hold Status:** Reads the **current** whole house hold status. [True | False]
- **Get Whole House Mode:** Reads the **current** whole house mode. [Off | Fan Only | Heat | Cool | Auto]
- **Get Whole House Activity:** Reads the **current** whole house activity. [Home | Away | Sleep | Wake | Manual]



Query commands, variables, conditional logic, Device Events, and more are ONLY available within the **Total Control Experience**. If this option is not available, speak with a **URC Representative** for more details.

- **Get Whole House Hold End Time:** Reads the **current** whole house hold end time. [24hr Format]
- **Get Zone Temperature:** Reads the **specified** zone's temperature. [F | C]
- **Get Zone Humidity:** Reads the **specified** zone's humidity level. [%]
- **Get Zone Activity:** Reads the **specified** zone's activity. [Home | Away | Sleep | Wake | Manual]
- **Get Zone Hold Status:** Reads the **specified** zone's hold status. [True | False]
- **Get Zone Hold End Time:** Reads the **specified** zone's hold end time. [24hr Format]
- **Get Zone Conditioning Status:** Reads the **specified** zone's conditioning status. [Idle | Prep Heat | Pend Heat | Prep Pend Heat | Active Heat | Prep Cool | Pend Cool | Prep Pend Cool | Active Cool | Fan]
- **Get Zone Heat Setpoint:** Reads the **specified** zone's heat setpoint. [F | C]
- **Get Zone Cool Setpoint:** Reads the **specified** zone's cool setpoint. [F | C]
- **Get Zone Fan Speed:** Reads the **specified** zone's fan speed. [Off | Low | Med | High]

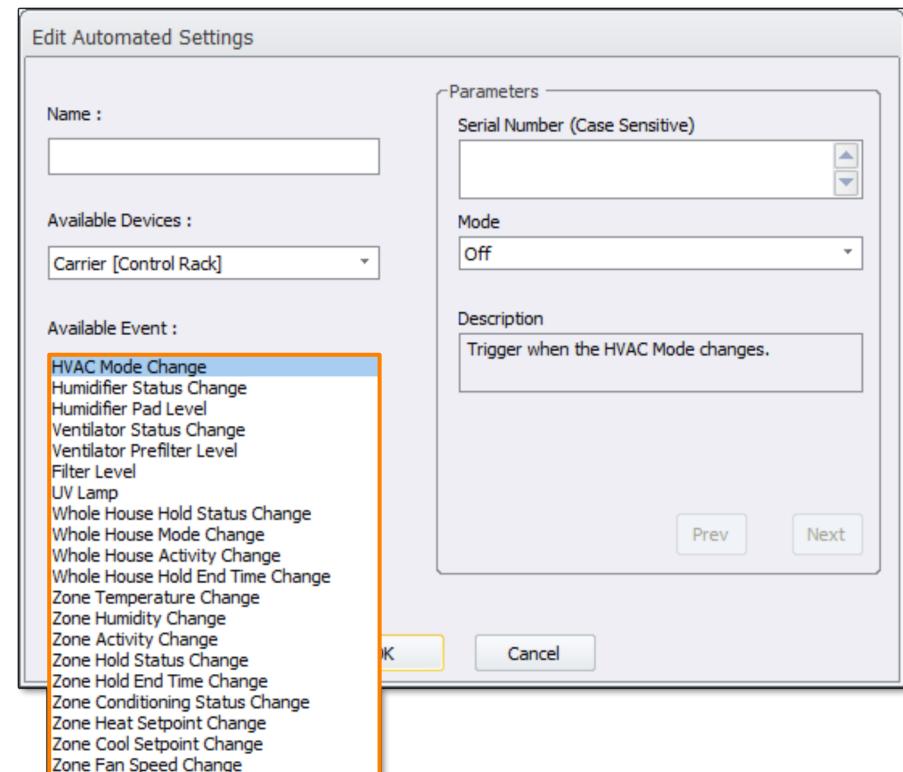


Query commands, variables, conditional logic, Device Events, and more are ONLY available within the **Total Control Experience**. If this option is not available, speak with a **URC Representative** for more details.

Device Events

The Carrier module has the ability to trigger custom macros based on device status changes.

- **HVAC Mode Change:** Triggers the macro based on a **specified** change in HVAC mode. [Off | Fan Only | Heat | Cool | Auto]
- **Humidifier Status Change:** Triggers the macro based on a **specified** change in humidifier status. [Off | On]
- **Humidifier Pad Level:** Triggers the macro when the pad level **falls below, raises above, or becomes equal** to a **specified** value.
- **Ventilator Status Change:** Triggers the macro based on a **specified** change in ventilator status. [Off | On]
- **Ventilator Prefilter Level:** Triggers the macro when the prefilter level **falls below, raises above, or becomes equal** to a **specified** value.
- **Filter Level:** Triggers the macro when the filter level **falls below, raises above, or becomes equal** to a **specified** value.
- **UV Lamp:** Triggers the macro when the lamp level **falls below, raises above, or becomes equal** to a **specified** value.
- **Whole House Hold Status Change:** Triggers the macro based on a **specified** change in house hold status. [Enabled | Disabled]
- **Whole House Mode Change:** Triggers the macro based on a **specified** change in the house HVAC mode. [Off | Fan Only | Heat | Cool | Auto]
- **Whole House Activity Change:** Triggers the macro based on a **specified** change in house activity. [Home | Away | Sleep | Wake | Manual]
- **Whole House Hold End Time Change:** Triggers the macro based on a **specified** change in house hold end time. [24hr Format]



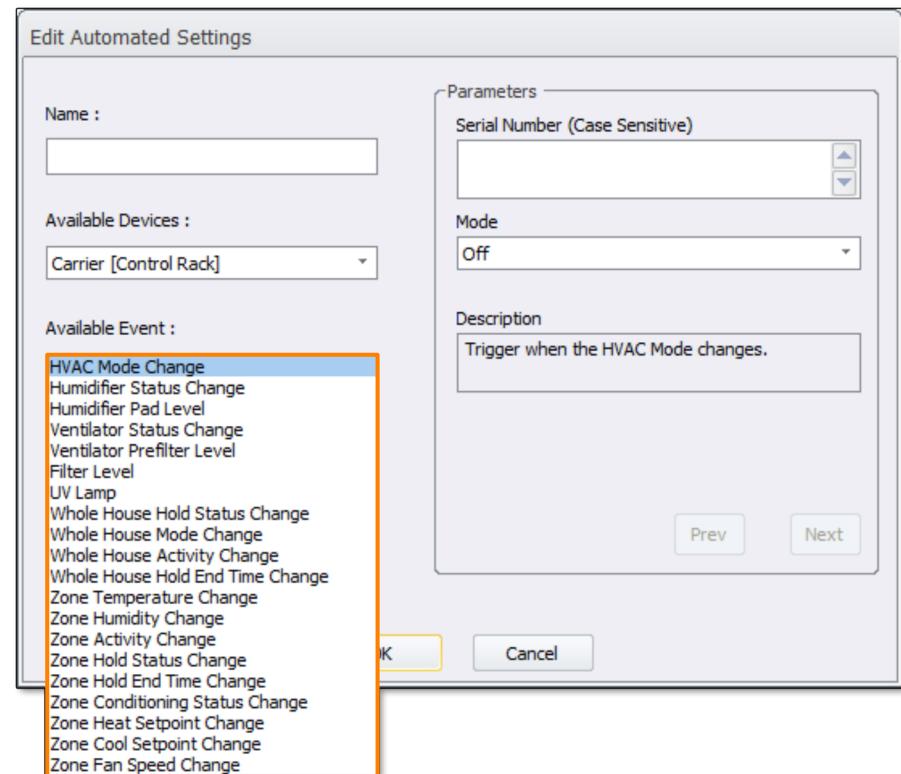
TOTAL CONTROL

- **Zone Temperature Change:** Triggers the macro when the temperature **falls below, raises above, or becomes equal** to a **specified** value.
- **Zone Humidity Change:** Triggers the macro when the humidity level **falls below, raises above, or becomes equal** to a **specified** value.
- **Zone Activity Change:** Triggers the macro based on a **specified** change in zone activity. [Home | Away | Sleep | Wake | Manual]
- **Zone Hold End Status Change:** Triggers the macro based on a **specified** change in zone hold status. [Running | Stopped]
- **Zone Hold End Time Change:** Triggers the macro based on a **specified** change in zone hold end time. [24hr format]
- **Zone Conditioning Status Change:** Triggers the macro based on a **specified** change in zone conditioning status. [Idle | Prep Heat | Pend Heat | Prep Pend Heat | Active Heat | Prep Cool | Pend Cool | Prep Pend Cool | Active Cool | Fan]
- **Zone Heat Setpoint Change:** Triggers the macro when the heat setpoint **falls below, raises above, or becomes equal** to a **specified** value.
- **Zone Cool Setpoint Change:** Triggers the macro when the cool setpoint **falls below, raises above, or becomes equal** to a **specified** value.
- **Zone Fan Speed Change:** Triggers the macro based on a **specified** change in zone fan speed. [Off | Low | Med | High]

Training Resources

For additional information on using macros in automation, and macro theory, refer to the following Self-Paced Tutorials linked below:

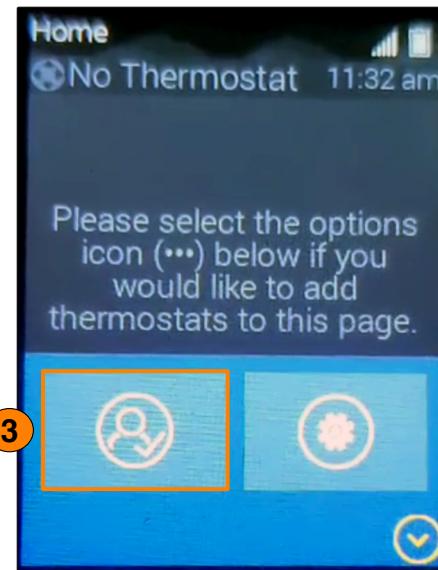
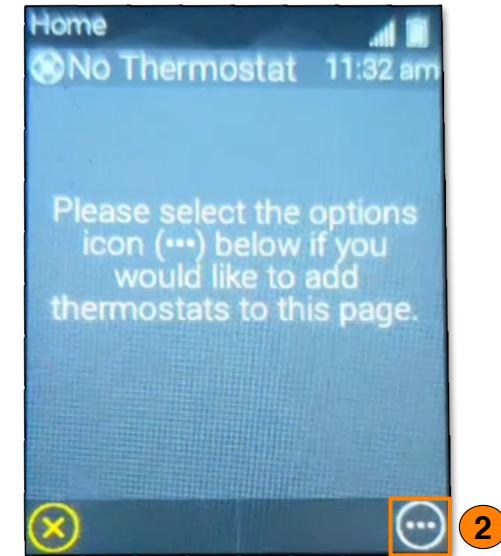
- [Making the Most of Two-Way Modules](#)
- [Macro Theory](#)
- [Using Macros in Automation](#)



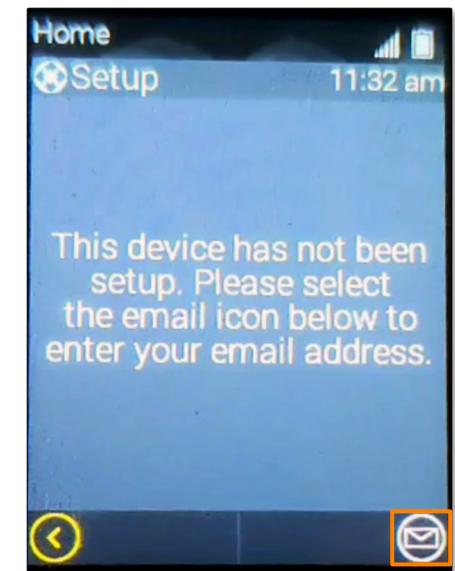
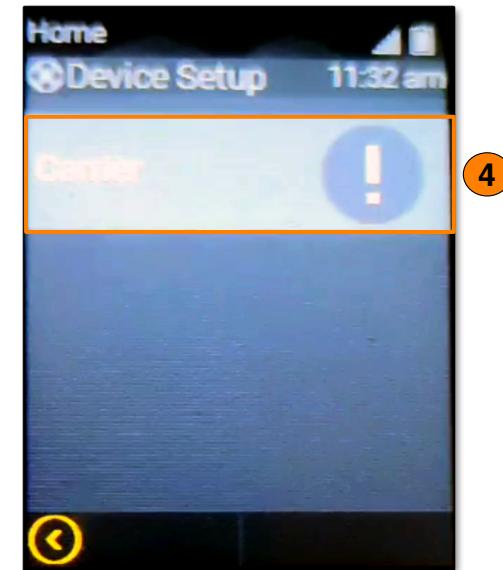
Initial Launch

When using the module for the **first time** the thermostat must be added to the thermostat list. To add a thermostat, perform the following:

1. Select **Climate Control** from an interface.
2. Select **Options (...)** icon.
3. Select the **User** icon.



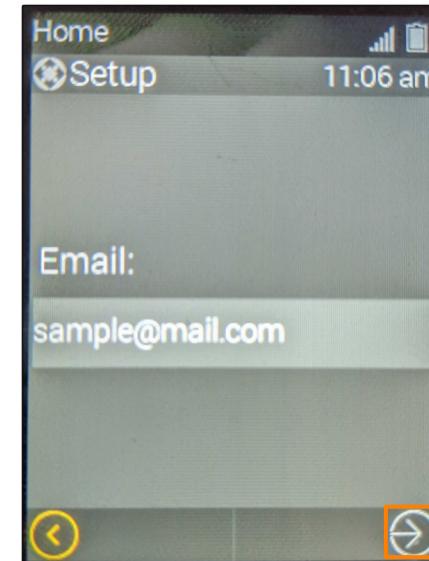
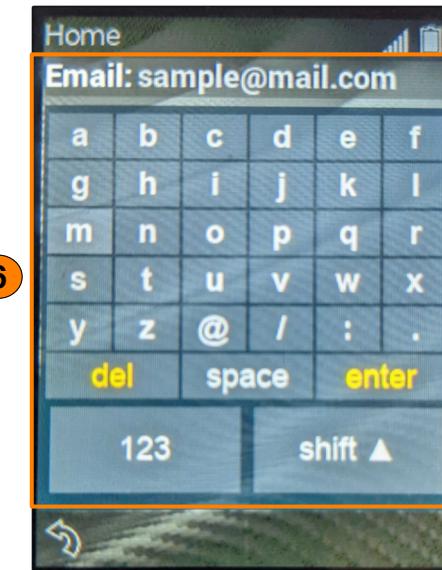
4. Select **Carrier** from the list.
5. Select the **Email** icon.



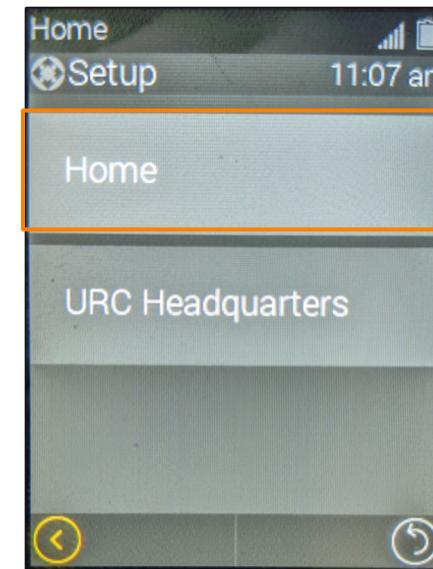
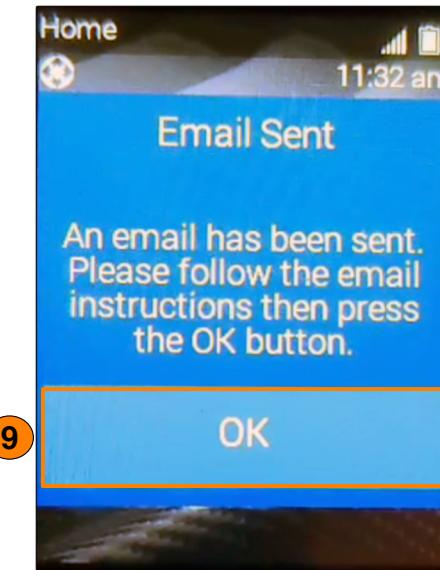
6. Enter an **email address** to receive further instructions on adding the thermostat.
7. Select **Next** to send the email.



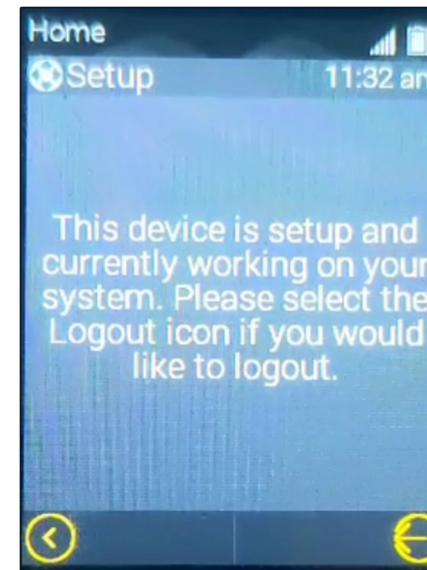
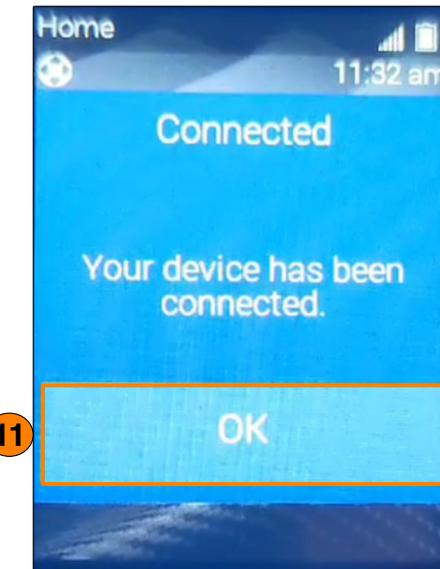
The email address entered does **not** need to be associated with the Carrier account. Use of an email account that is **easy to access** is encouraged.



8. Review and complete the emailed instructions.
9. Select **OK**.
10. Select **a room** to add the thermostat to it.



11. Select **OK**.
12. Select the **Main** button to return to the room menu. The thermostat is now integrated with the module.

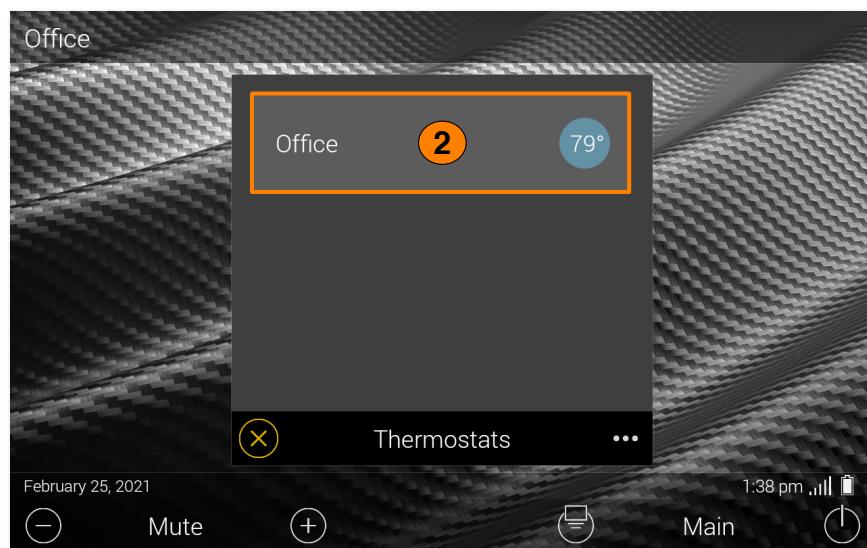
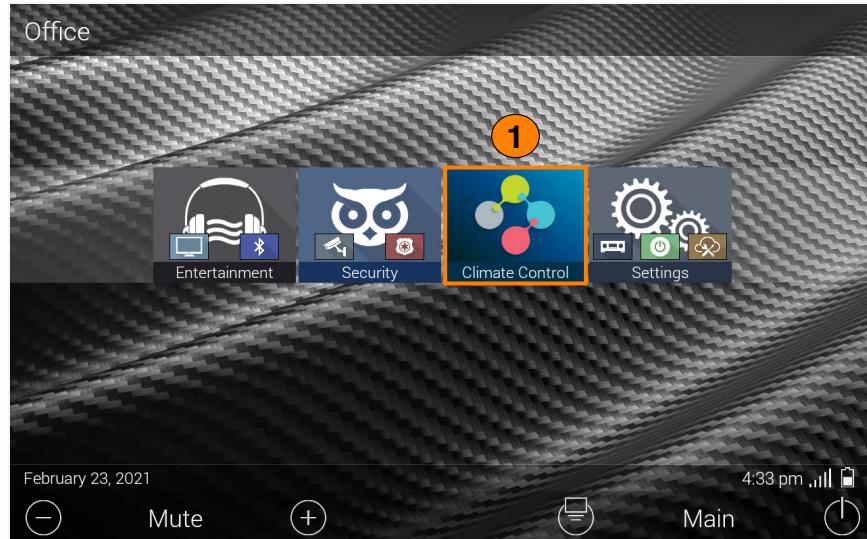


Using the Module

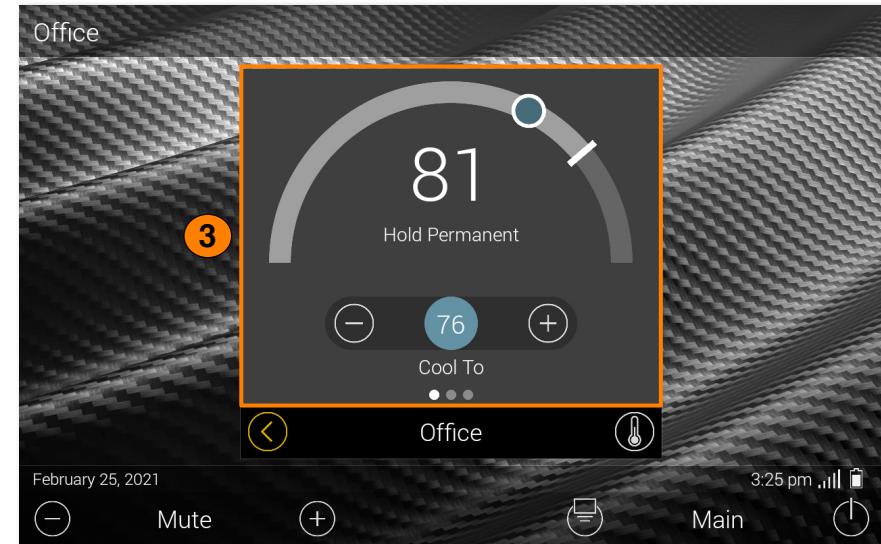
This section of the document explains how to operate the climate control module.

Launching the Module:

1. Navigate to the room where the **Climate Control** button is located and select it.
2. Select a specific thermostat from the available list.



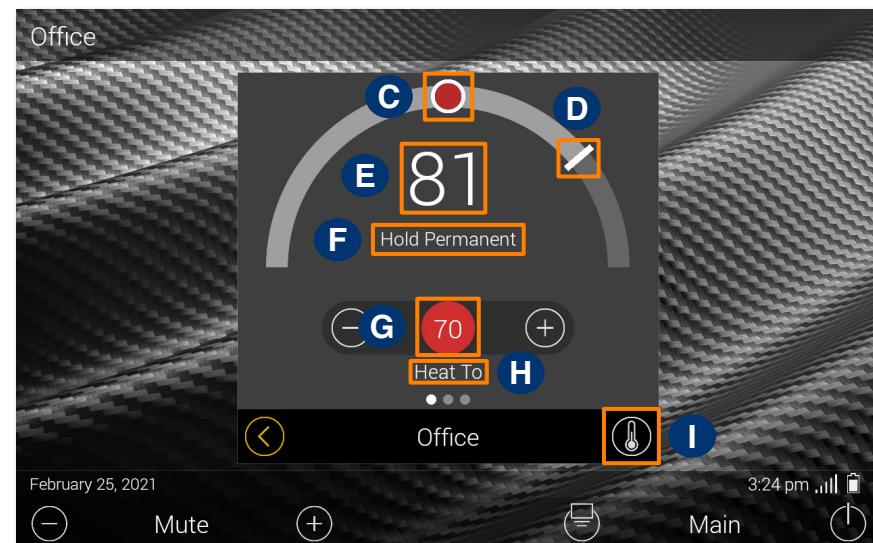
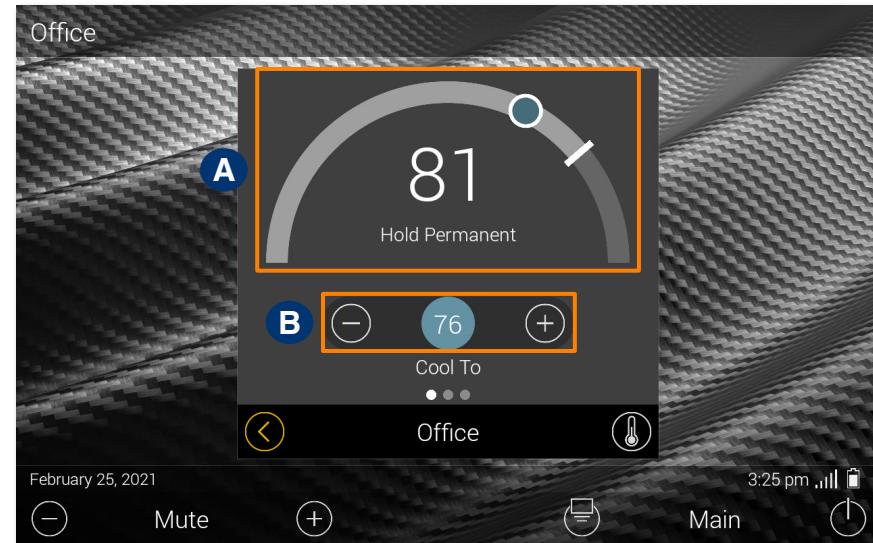
3. The UI displays controls for the selected thermostat.

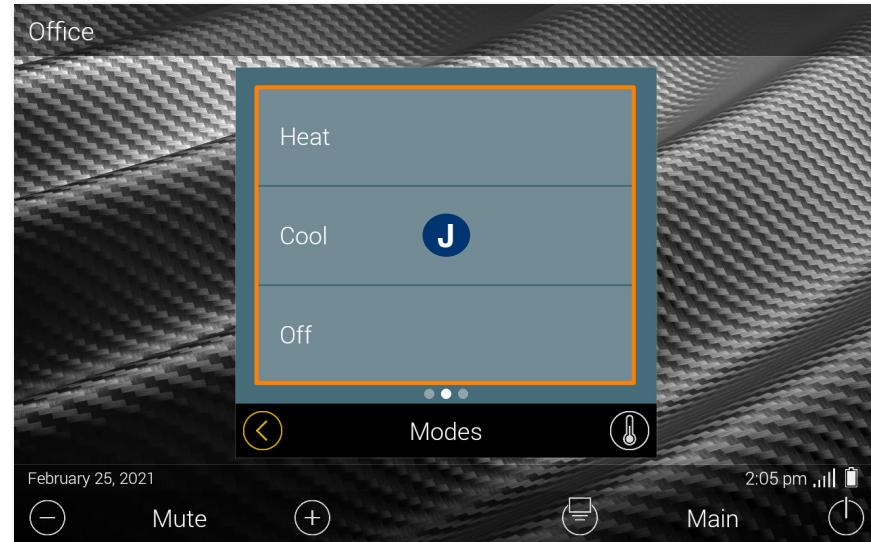


Climate Control

Below are descriptions of the available buttons on the **Climate Control** window:

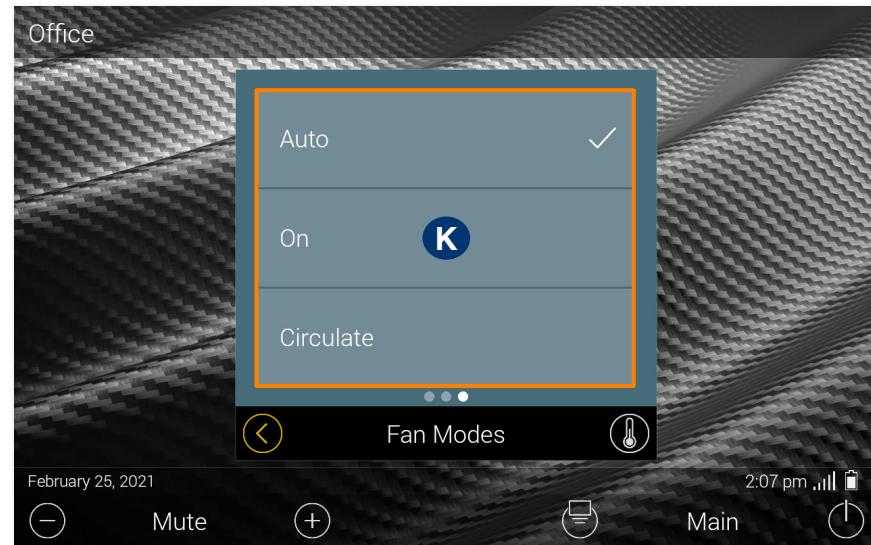
- A. Temperature Range:** Shows the temperature range available for heating and cooling.
- B. Discrete Controls:** The "+" and "-" buttons can be used to adjust the desired temperature in increments of one (1) degree.
- C. Setpoint Indicator:** The desired temperature for cooling or heating. This icon can be dragged and dropped to set a specific temperature.
- D. Current Temperature Indicator:** Reflects the current temperature level in comparison to the desired setpoint.
- E. Current Temperature:** Reflects the current temperature reported by the thermostat.
- F. Hold Status:** Reflects the current hold status of the thermostat.
- G. Setpoint:** Displays the current set point for heating or cooling.
- H. Current Mode:** Displays the current HVAC mode.
- I. Thermostat List:** Returns to the thermostat list.





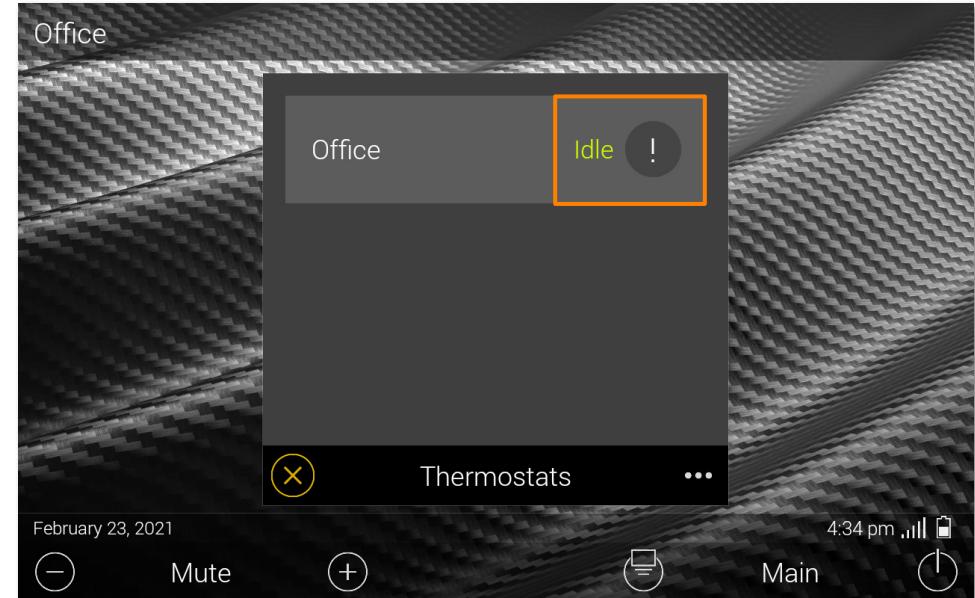
J. HVAC Modes: Allows the current system mode to be changed.

K. Fan Modes: Allows the current fan mode to be changed.



Climate Control Troubleshooting

If the thermostat drops off the wireless network, or was never connected, the UI provides a warning icon to alert the user. Ensure that the thermostat is connected to the wi-fi or that the network settings have not changed. Once the thermostat is back on the network, the UI automatically updates and removes the warning icon.

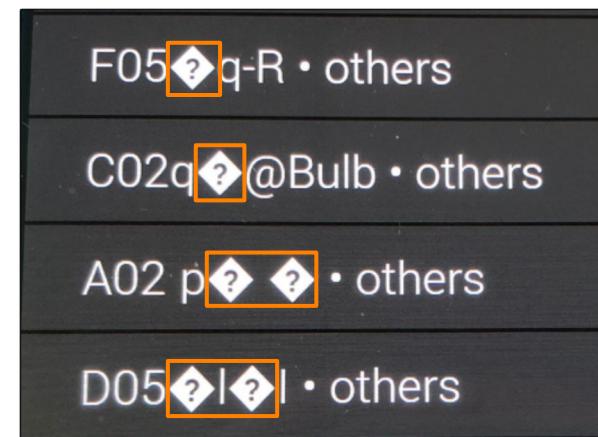
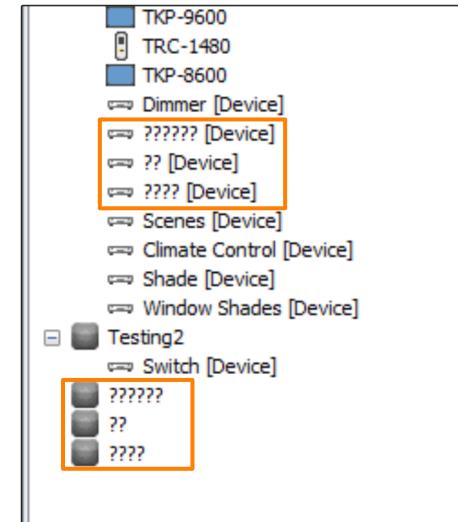
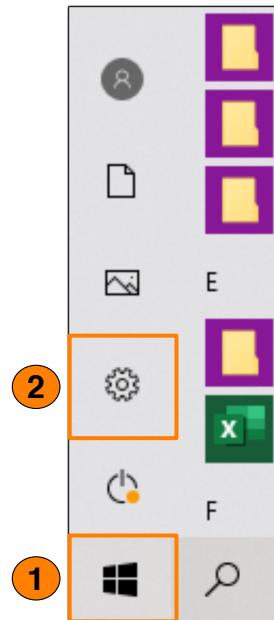


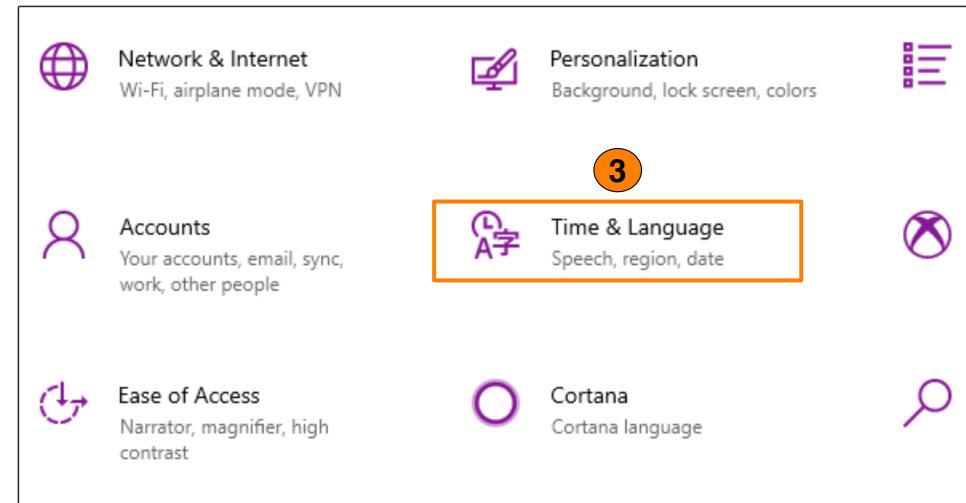
Unicode Troubleshooting

As devices and software modules become more complex there is more chance of compatibility issues. Due to regional character support, it is possible to encounter a situation where text is not displayed correctly for both Accelerator software and user interfaces.

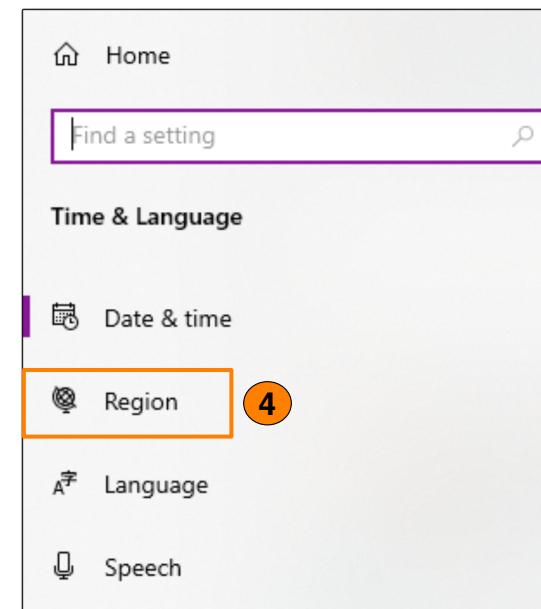
To solve this issue, Worldwide Language Support **must be enabled** on the **PC used for programming**. Perform the following:

1. Select the **Start Menu** icon.
2. Select the **Settings** icon. This opens a new window.

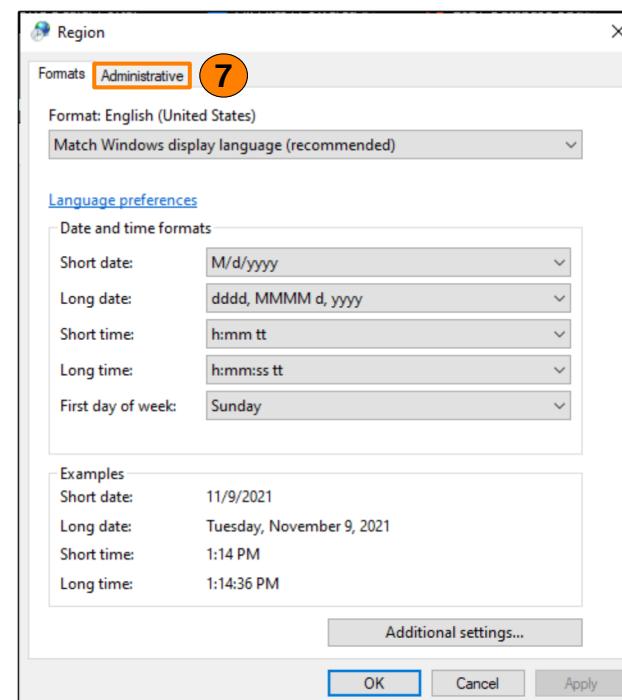
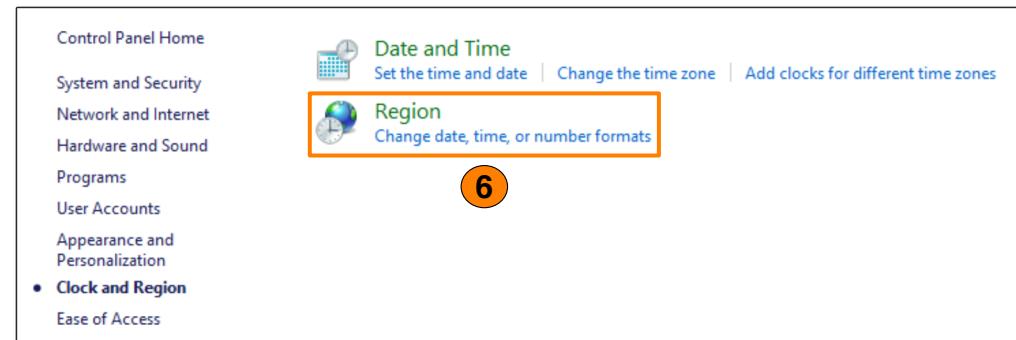
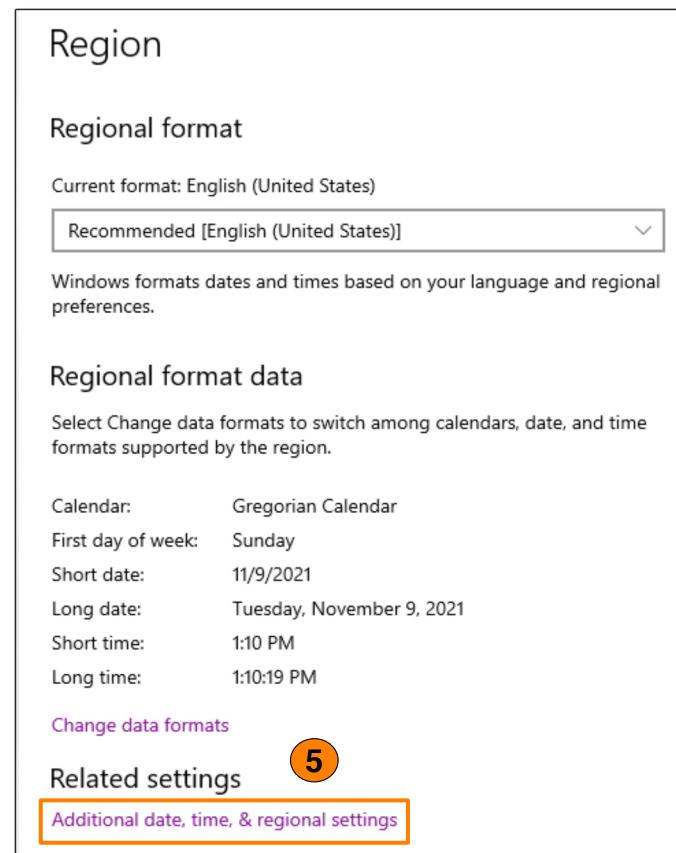




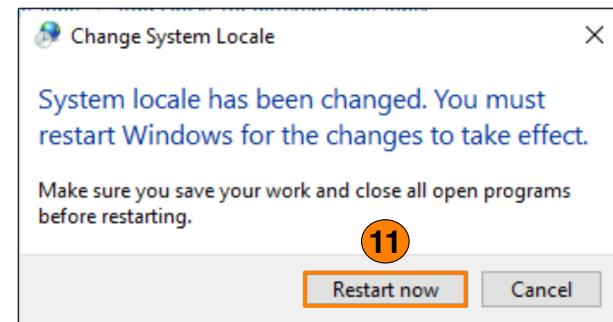
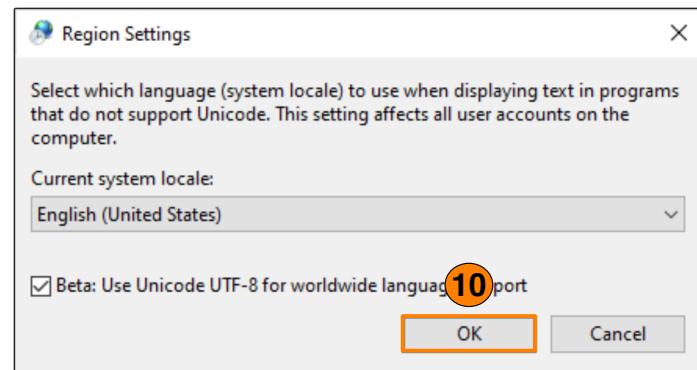
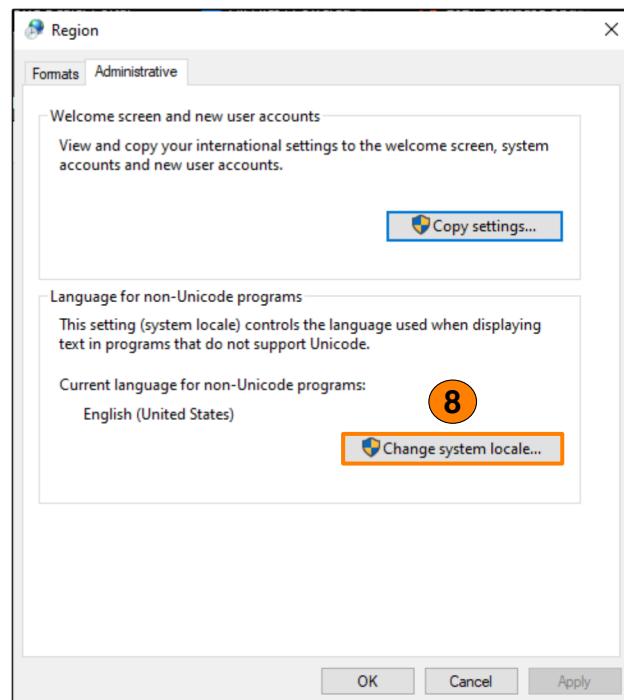
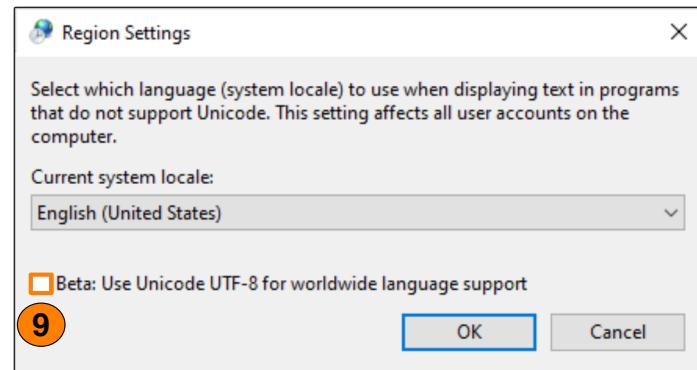
3. On the Settings menu, select **Time & Language**. This opens a new window.
4. Select **Region** from the options on the left.



5. Under **Related settings**, select the **Additional date, time, & regional settings** link. This opens a new window.
6. Under **Region**, select the **Change date, time, or number formats** link. This opens a new window.
7. Select the **Administrative** tab.



8. Select the **Change system locale...** button. This opens a new window.
9. Select the **empty checkbox** to enable Unicode UTF-8 Worldwide Language Support.
10. Select **OK**.
11. The PC prompts for a restart. Save any necessary work and restart the PC to complete this process.



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