



Honeywell Thermostats

Crestron Home™ Driver

Base Model: T9

Device Type: Platform Extensions

Version: 1.4.6

Notes & Recommendations

This driver will control a Honeywell T-series thermostat (examples include but are not limited to T5, T6 Pro, T9, and T10). The thermostat will have to be paired with the Honeywell Home app first. Please refer to the instruction manual for the thermostat that you have for thermostat setup instructions. This driver talks to the thermostat with the cloud so an active internet connection will be necessary. In addition, a (free) Honeywell developer account will need to be registered to set up this driver properly. A developer account is needed because of access limitations imposed by Honeywell. The owner will also have to make available the thermostats for Crestron control through a web browser (explained later). The driver will poll for feedback from Honeywell's server approximately every 5 minutes. This is a restriction set by Honeywell.

This driver is a cloud-based API. It takes some seconds to take the commands from any device or app.

System Requirements and Dependencies

Versions of software used:

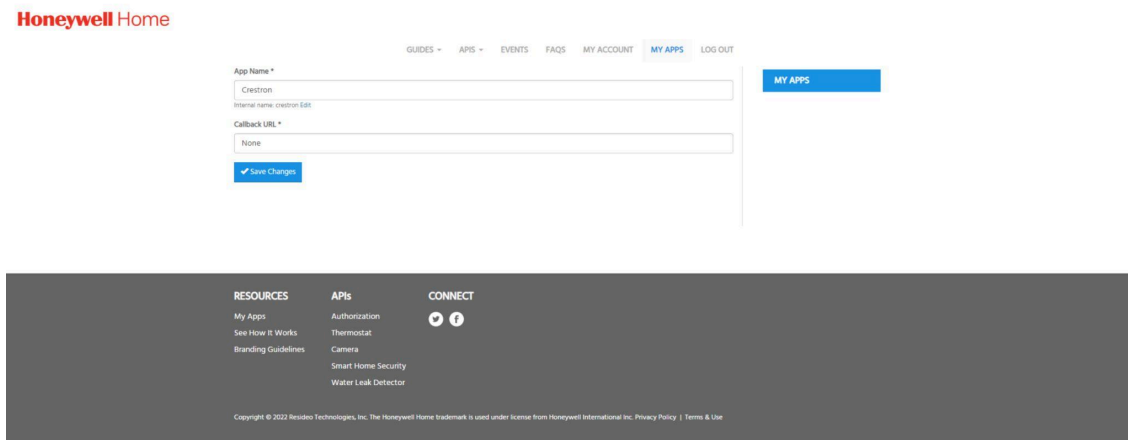
- Crestron Home 3.013
- Active internet connection to the processor
- Honeywell developer account (<https://developer.honeywellhome.com/>)
- Homeowner's Honeywell Home credentials for authorizing thermostats

This driver comes with a 2-hour trial license. You can purchase a full license at (add product link from the store)

For additional information on this driver please visit the FAQs section on our website (Add product FAQ section link)

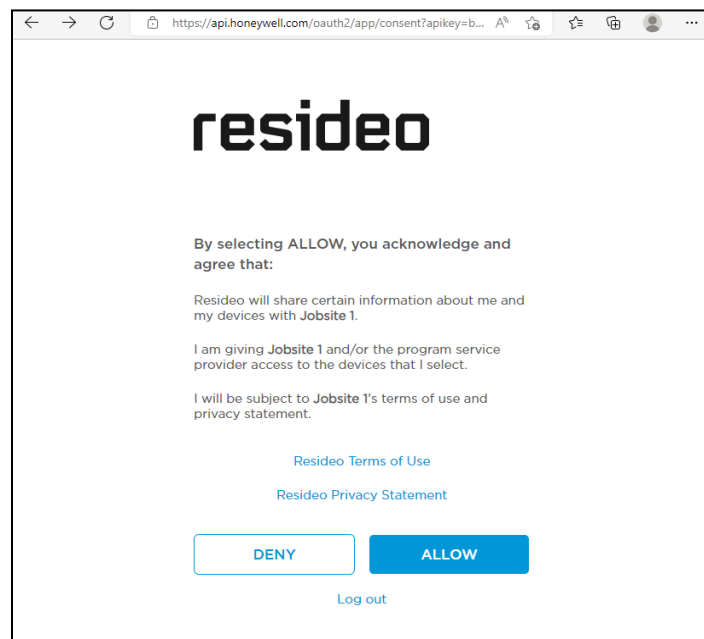
Installation/Upgrade Instructions

The first step is to make sure the thermostat is paired with the Honeywell Home app on a phone/tablet. Once the thermostat(s) are paired, create a Honeywell developer account(<https://developer.honeywellhome.com/>). Once the developer account has been created, log in and go to My Apps > Create New App. The App Name can be anything you want and the Callback URL. For this driver use **None** (case-sensitive) and press Save Changes.



The screenshot shows the Honeywell Home developer portal. At the top, there's a navigation bar with links: GUIDES, APIs, EVENTS, FAQs, MY ACCOUNT, MY APPS (highlighted), and LOG OUT. Below this, there's a form to create a new app. The form has three fields: 'App Name' (with 'Credtron' entered), 'Internal name (optional Edit)', and 'Callback URL' (with 'None' entered). A 'Save Changes' button is at the bottom left of the form. To the right of the form is a 'MY APPS' button. Below the form, there's a footer section with 'RESOURCES' (My Apps, See How It Works, Branding Guidelines), 'APIs' (Authorization, Thermostat, Camera, Smart Home Security, Water Leak Detector), and 'CONNECT' (with social media icons). At the very bottom, there's a copyright notice: 'Copyright © 2022 Resideo Technologies, Inc. The Honeywell Home trademark is used under license from Honeywell International Inc. Privacy Policy | Terms & Use'.

A new entry should show up, if you click inside it, you will get your Consumer Key and Consumer Secret. Copy both down as you will need to provide this information to the driver.



The screenshot shows a web browser window with the URL <https://api.honeywell.com/oauth2/app/consent?apikey=b...>. The page has a large 'resideo' logo at the top. Below the logo, there's a message: 'By selecting ALLOW, you acknowledge and agree that:'. This is followed by three lines of text: 'Resideo will share certain information about me and my devices with Jobsite 1.', 'I am giving Jobsite 1 and/or the program service provider access to the devices that I select.', and 'I will be subject to Jobsite 1's terms of use and privacy statement.' Below this text are two links: 'Resideo Terms of Use' and 'Resideo Privacy Statement'. At the bottom, there are two buttons: 'DENY' and 'ALLOW'. Below the buttons is a 'Log out' link.

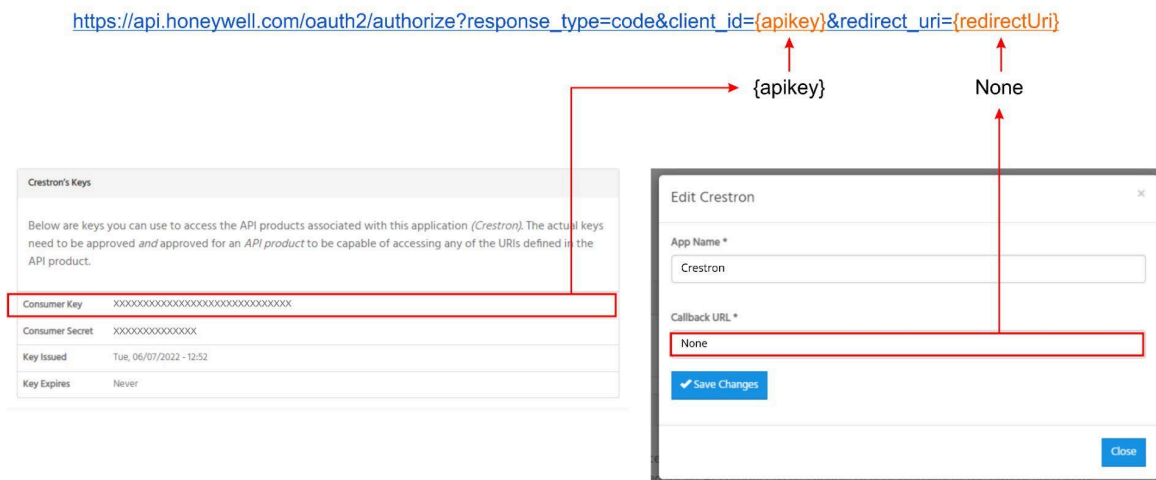
Generate Authorization Code

You will next need to generate an authorization code. Open a web browser and put in the URL, replacing { } with values specific values:

https://api.honeywell.com/oauth2/authorize?response_type=code&client_id={apikey}&redirect_uri={redirectUri}

Replace **{apikey}** with the Consumer Key that you wrote down earlier and replace **{redirectUri}** with None (case sensitive). An example of what the URL may look like after doing that replacement is:

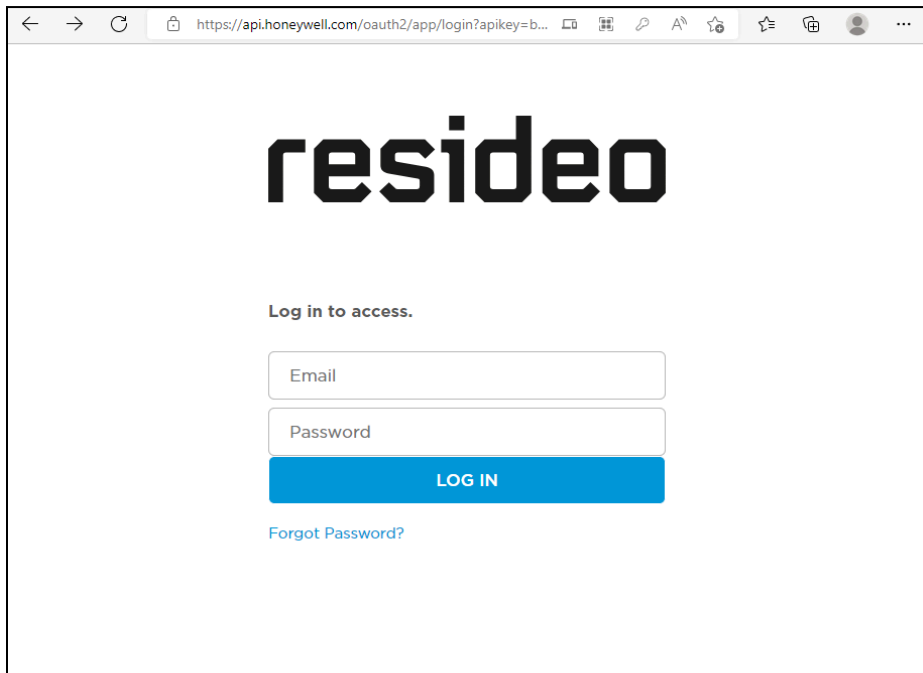
https://api.honeywell.com/oauth2/authorize?response_type=code&client_id=yourapikeyhere&redirect_uri=None



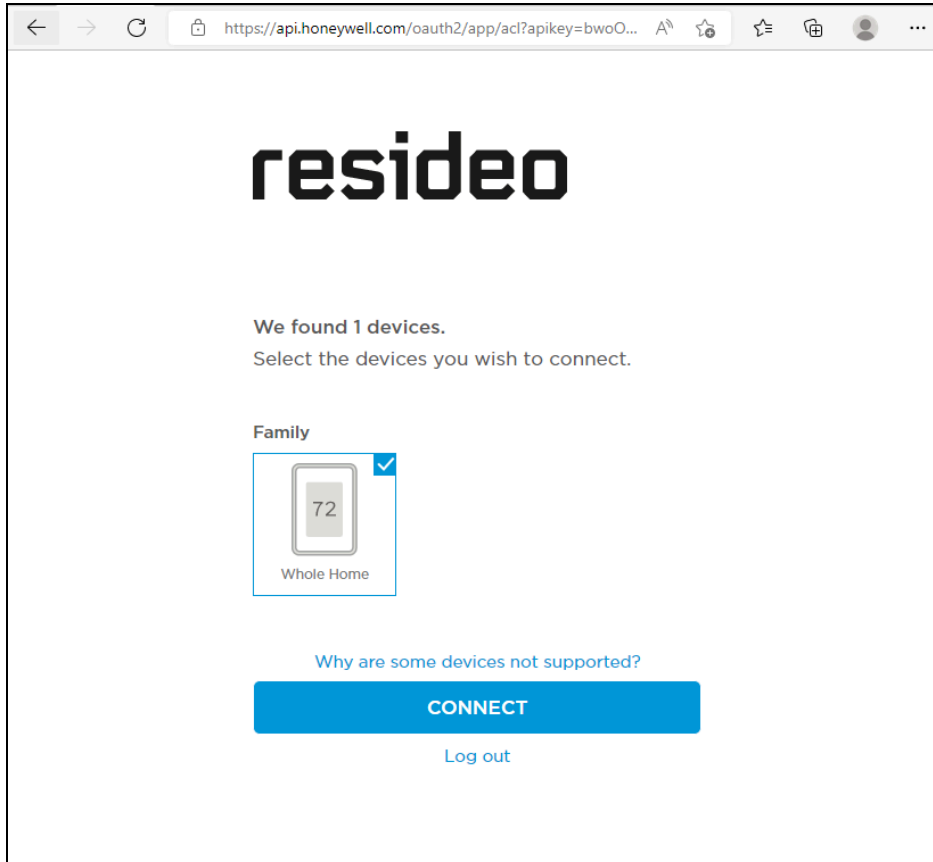
Note:

Do not use the back button on your browser. It could invalidate the authorization code and will affect generating authorization codes in this browser session! Always use the original URL when you get a new authorization code.

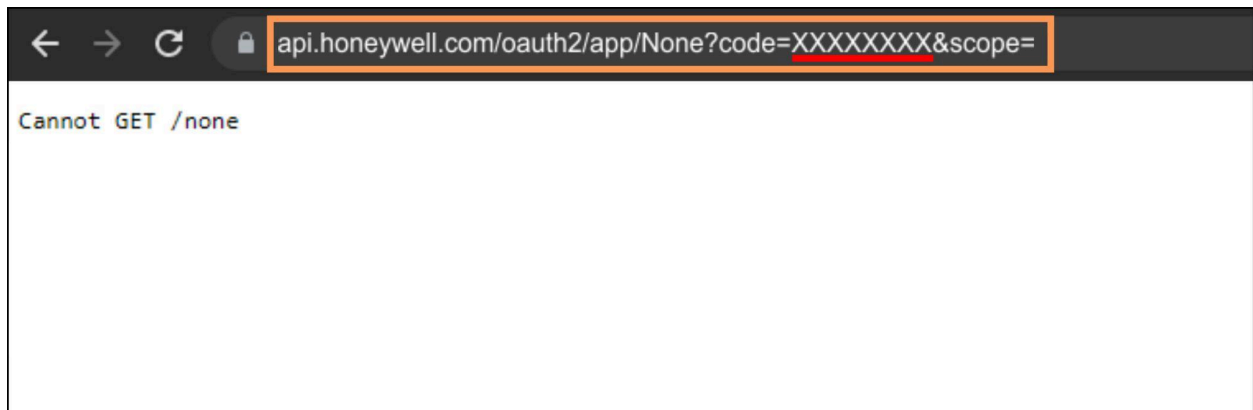
Have the user/homeowner log in and press the button to allow access. Select all the thermostats that you/they want Crestron to have access to.



The image shows a web browser window with the URL <https://api.honeywell.com/oauth2/app/login?apikey=b...>. The page features the "resideo" logo in a large, bold, black font. Below the logo, the text "Log in to access." is displayed. There are two input fields: "Email" and "Password". Below these fields is a blue button labeled "LOG IN". At the bottom of the login section, there is a link that says "Forgot Password?".

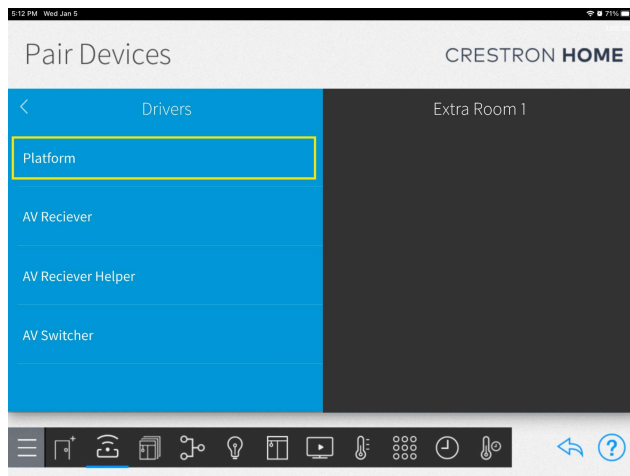


Press connect and you will be redirected to a "not found - error" page. Look at the URL and copy down the authorization code (after the `code=` but before the `&`). You will need to enter this authorization code into the driver.



Install the Driver

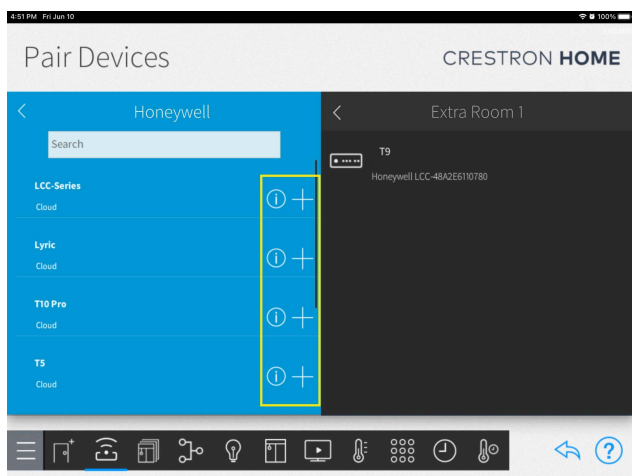
Install the CH driver (Drivers > Platform > Honeywell)



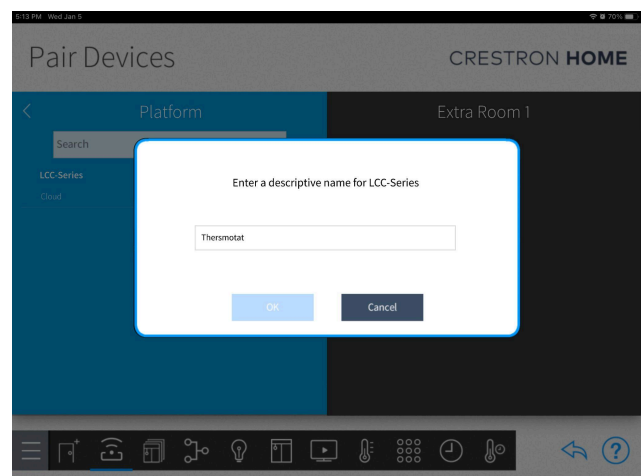
1-Select Platform



2-Select "Honeywell"



3-Add driver to Room



4-Add a name for the Thermostat

In the next step, put in the information for the authorization code, API Key, and API Secret that you copied down previously. Put in the name of the location (found in the Honeywell Home app, case matters).

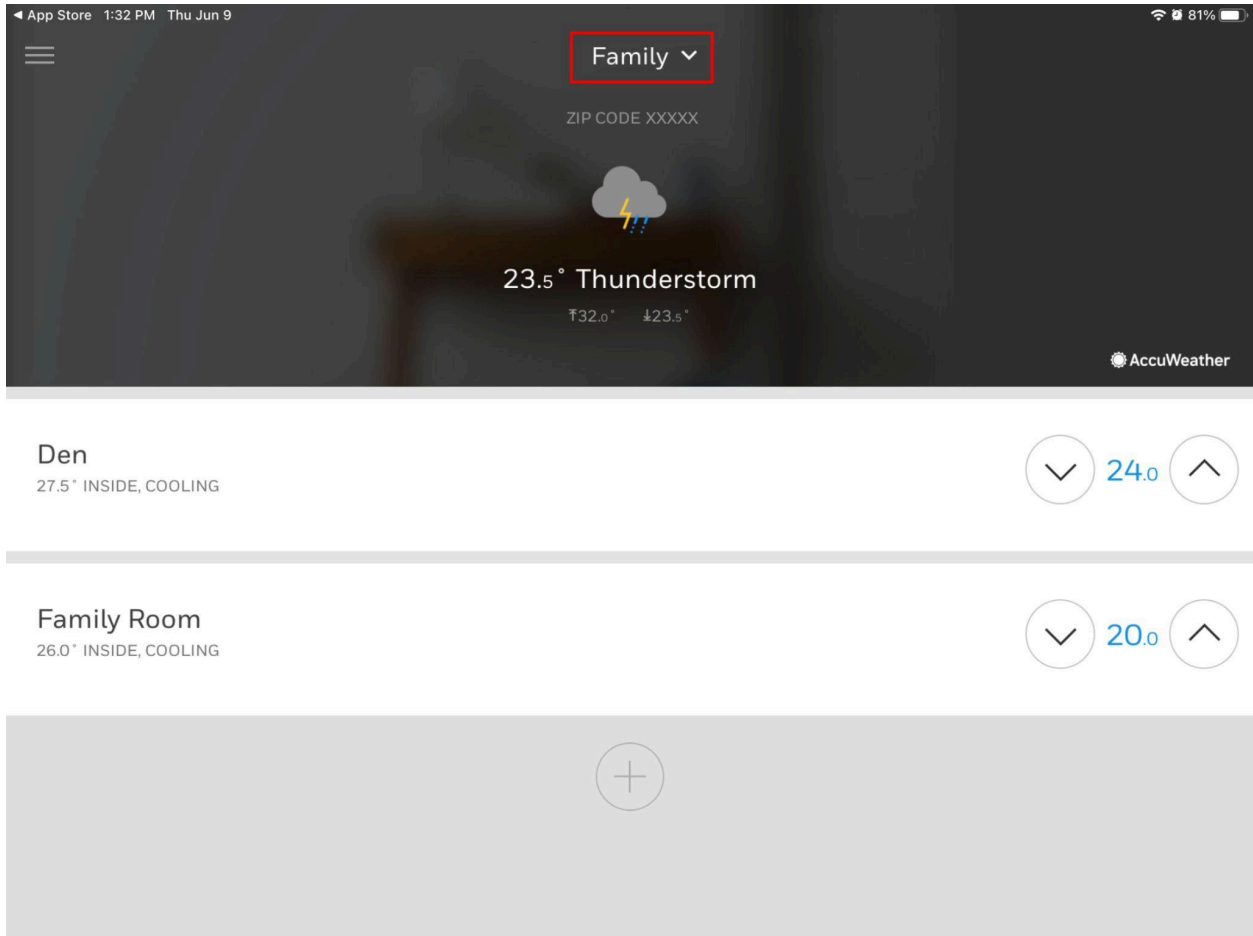
<https://api.honeywell.com/oauth2/app/none?code=XXXXXXXXX&scope=>

The image shows a web form titled "Installation Settings" with five sections. Red arrows point from the URL above to the input fields in the first three sections. A red line connects the "Consumer Key" and "Consumer Secret" fields in the "Crestron's Keys" table to the "User API key?" and "User API Secret key?" fields in the "Installation Settings" form.

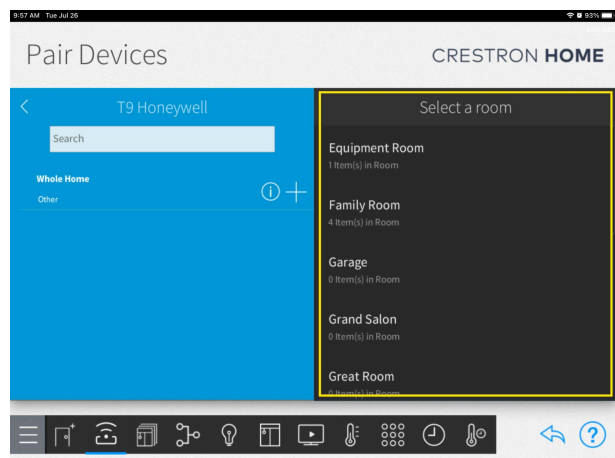
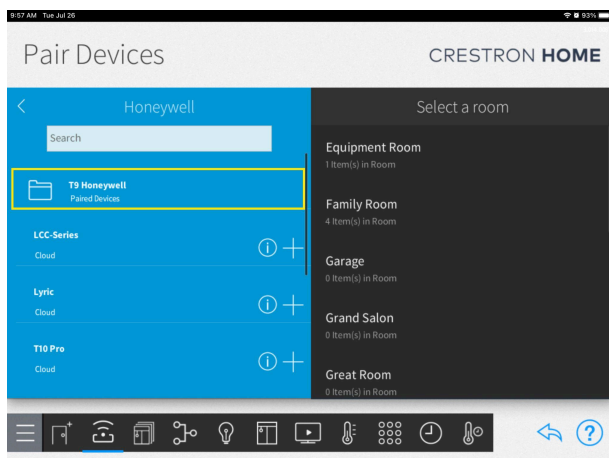
Installation Settings	
①	Authorization code? Please, enter the authorization code. It is available from the Honeywell page: https://developer.honeywellhome.com/authorization-oauth2/apis/get/authorize
①	User API key? Please, enter the User API key. It is available from the developer account web page: https://developer.honeywellhome.com/
①	User API Secret key? Please, enter the user API Secret key. It is available from the developer account web page: https://developer.honeywellhome.com/
①	Site Name? Please, enter the Site Name.
①	Instance number? Please, enter the instance number for this driver. The number should be different between driver instances. It helps to save the user thermostat information gotten from Honeywell.

Crestron's Keys	
Below are keys you can use to access the API products associated with this application (<i>Crestron</i>). The actual keys need to be approved <i>and</i> approved for an <i>API product</i> to be capable of accessing any of the URIs defined in the API product.	
Consumer Key	XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Consumer Secret	XXXXXXXXXXXX
Key Issued	Tue, 06/07/2022 - 12:52
Key Expires	Never

The **site name** is available in the Honeywell Home app, this name should be added to the "Site Name?" field.



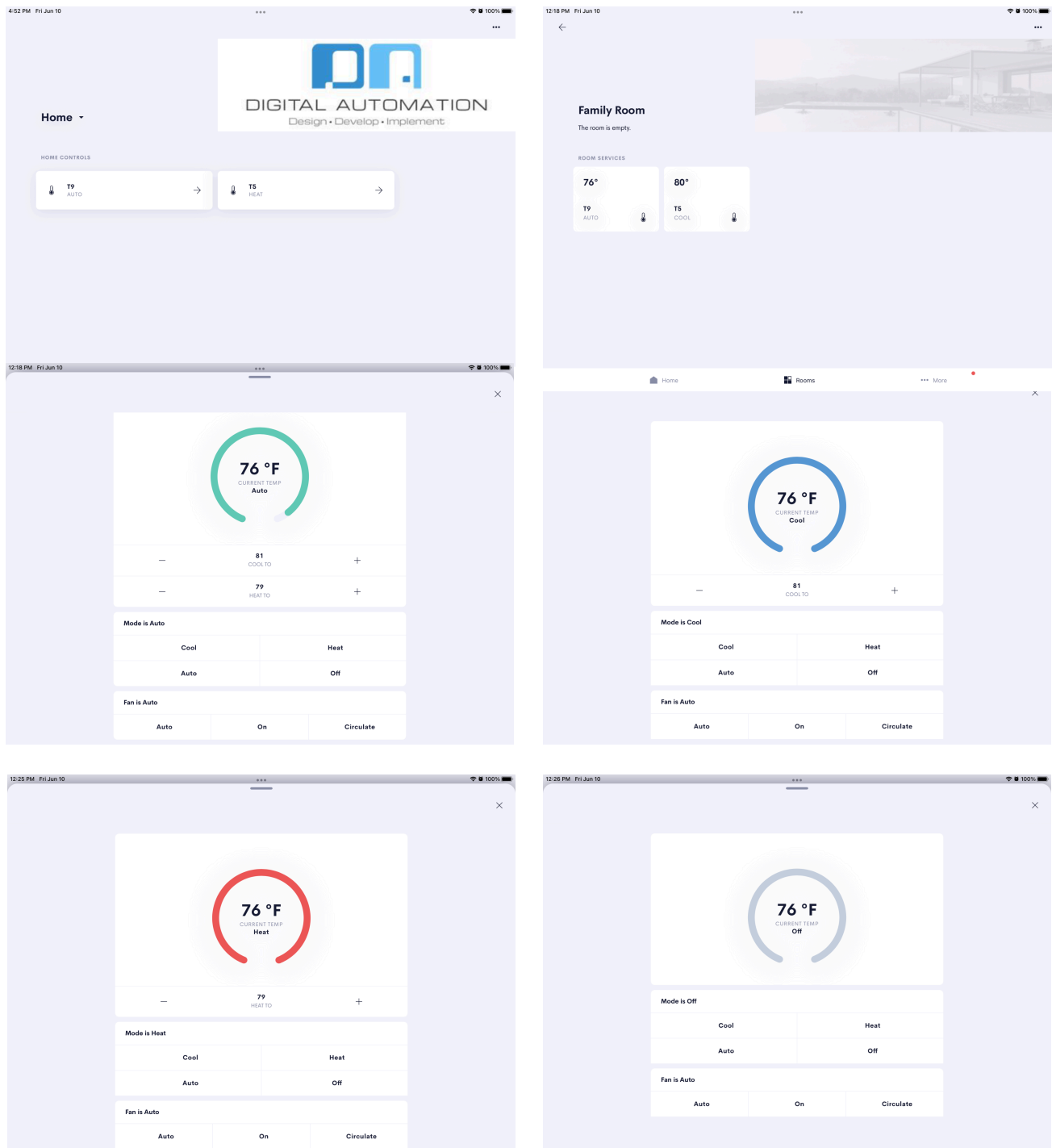
After finishing filling in the fields select OK, the system will query and create a folder in the **Managed Platforms** path with all the thermostats that have been made available for control. Add each one to the appropriate room.

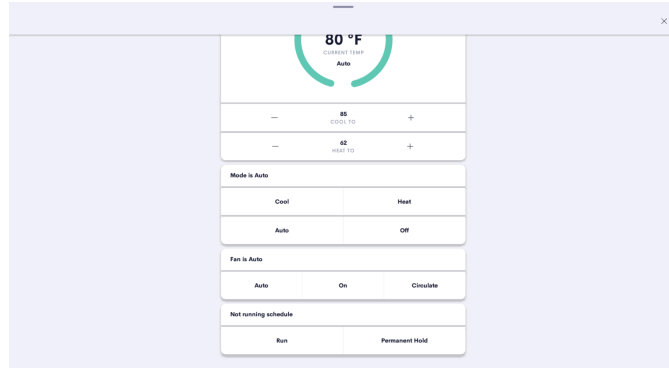


Note:

When the processor is rebooted and doesn't have an Internet connection the thermostats will show up when the polling is received. It may take up to 1 hour.

End-User Experience





Schedule:

The driver displays the current schedule mode.

If any of the schedules are updated, then the scheduler must be engaged at least one time. If the scheduler is engaged from the thermostat or the Honeywell Home App, it may take up to 6 minutes until the driver gets its update.

If no schedules are created on the device, the schedule buttons will not be available. If there is an available schedule, the schedule buttons will be visible.

Additional Information:

If there is a schedule running on the thermostat, any setpoint adjustments will cause the driver to use "Hold Until" mode. The time used for the "Hold Until" is the next scheduled event.

Schedule buttons:

- **Run Schedule:** Run the current schedule.
- **Permanent Hold:** Hold the setpoint values and ignore the scheduler

Known Issues

- Feedback polling is limited to every 5 minutes, as per Honeywell's API requirements
- Thermostats paired with Honeywell's Total Connect Comfort (TCC) are not supported

- If you select the option to have the tile show on the CH home page, you will not get the temperature. This is a limitation of CH.
 - After a reboot, the created thermostats take at least 20 seconds to be ready. It is necessary when the processor has several drivers added.
-

Supported Features

System Mode Changes (Off, Cool, Heat, Auto). Auto is available if the device supports it.

Fan Mode Changes (Auto, On, Circulate)

Setpoint Changes (Cool and Heat)

Schedule Mode (Run, Permanent Hold)

Show the thermostat on the home screen.

Test Environment

The following hardware was used for testing:

Crestron hardware:

CP4R - firmware v4.0021.0214

Crestron Home (processor) 2.8002.00115

TSW - firmware 1.006.0046

Android - 1.25.15+tr

iOS - 1.21.15

Supported Models

T5

T6 Pro

T9

T10 Pro

Lyric Round

Contact Information

If you have any questions please contact us at drivers@digitalautomation.us

Version History

1.0.0

06/10/2022

Changes since the Last Version

- Initial release

1.1.0

06/10/2022

Changes since the Last Version

New Features

- Updates to schedule mode sent with the system and set points command.

1.2.0

06/7/2022

Changes since the Last Version

New Features

- Buttons were added to enable and disable the scheduler.
- The UI prints the schedule mode on the schedule line.
- Sets the thermostat setpoint status for command sending based on schedule mode.
- Show the thermostat on the home page.

1.3.0

07/26/2022

Changes since the Last Version

Bug fix

- Resolves an issue where the paired device folder doesn't always show up on the CH Setup App.

1.4.0

08/5/2022

Changes since the Last Version

Bug fix

- Resolves an issue with commands sending based on schedule modes.
- Hides the scheduler buttons if there are no schedules defined on the thermostat or if they're disabled.

1.4.1

1/26/2023

Changes since the Last Version

Bug fix

- Resolves an issue in the latest firmware with paired drivers not being created after a reboot.

1.4.2

3/27/2023

Changes since the Last Version

- Resolves an issue to send the system command when the Honeywell service doesn't send the "hold until" time.

1.4.3

8/01/2023

Changes since the Last Version

Bug fix

- Resolves an issue when the processor is rebooted and there is no Internet connection.

1.4.4

9/06/2023

Changes since the Last Version

- Resolves an issue for missing thermostat drivers added when there are several drivers loaded during the processor's startup phase. This can lead to certain platform drivers experiencing difficulties in initializing properly. To avoid it after a reboot, it might take up to 20 seconds before you see the thermostats on Crestron Home.

1.4.5

10/27/2023

Changes since the Last Version

- Resolves an issue for command sending.

1.4.6

3/22/2024

Changes since the Last Version

- Resolves an issue for thermostats without fan support.
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