

SIMPL MDU PLATFORM DRIVER FOR CRESTRON HOME

Revision: 1.04

Date: 02 December 2021

CRESTRON HOME ONLY

This document describes the configuration of the SIMPL Home Driver for Crestron Home only.

ADDITIONAL READING

Please refer to the Using 3rd Party driver document for instructions on installation and configuration of the driver with Crestron Home.

MODULE DESCRIPTION

The platform module provides integration with SIMPL within the Crestron Home user interface. The system will also support Crestron Home programmable sequences. A single driver is used to bridge Crestron Home with a custom SIMPL Windows module. Allowing for increased flexibility and customisation within Crestron Home.

INSTALLATION

Setup the SIMPL Module - Host

SIMPL MDU Intergation Host v1.02	
	CrestronHomeConnected
HostPort	33333d
Adapter	LAN Adapter
LicenceQuantity	100d
LicenceKey	xxxx-xxxx-...

Configure the parameters of the SIMPL Host Module as follows:

ServerPort – Enter the server port, this must be an available port and match with the port entered on the Crestron Home side.

Adapter – Leave the adapter as default unless something specific is being utilised.

CrestronHomeConnected – This signal indicates that Crestron home and the Module are connected.

LicenceQuantity – Enter the number of SIMPL Drivers on the Crestron Home end that you would like to Licence.

LicenceKey – Unlike the SIMPL Home Driver, SIMPL MDU inputs the licence key on the host server side, allowing for multiple Crestron Home processor connections, without having to enter multiple licence keys.

Its important to note that you shouldn't add more modules to Simpl host than are supported by your license key. The host will only register the exact number of modules specified and not necessarily in a logical order. If you add more modules than specified, you might not see the ones you require.

The host module needs to be setup just once in the program.

IconName – This allows the user to specify a specific icon for the tile within Crestron Home.

Only Crestron Supported Icons are available, a list of available icons can be found at:

https://sdkcon78221.crestron.com/sdk/Crestron_Certified_Drivers_SDK/Content/Extension-Device-Icons.pdf

Title – This title will appear as the header for the Tile when it is expanded.

Tile location – This will set the location of the tile. You can choose to display the tile in the home page, room page or both.

Headers – This will appear as the header for the section in question and is displayed in the tile. These headers are present for Buttons, Actions and Values. If you leave a header blank (i.e. ""), any items present in the field subgroup will be grouped more closely with the previous field.

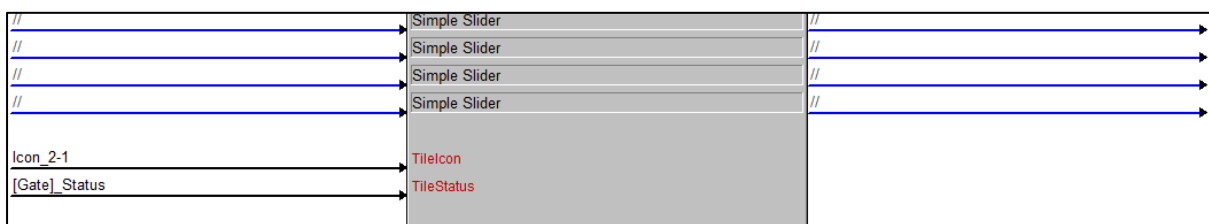
Buttons - can define several digital signals such as toggle buttons, in this example they keypad has 5 toggle Button States. The output of a button is a latched signal, the button is either active high or active low. The labels for each section enable the button to be displayed and function within the Tile.

Actions - can also be defined using a serial input and a digital pulsed output. The input in the keypad example could be a Crestron Home Icon such as "icShadesOpen", which would show the matching icon in the UI.

Values - can also utilise values with Analogue inputs and outputs (both 0-65535), which can be used to output and input values. Values also have a parameter to say if they are a simple slider or a toggle slider, in which case they also have a digital input/output for the toggle state. In this example, they have been used as simple Sliders.

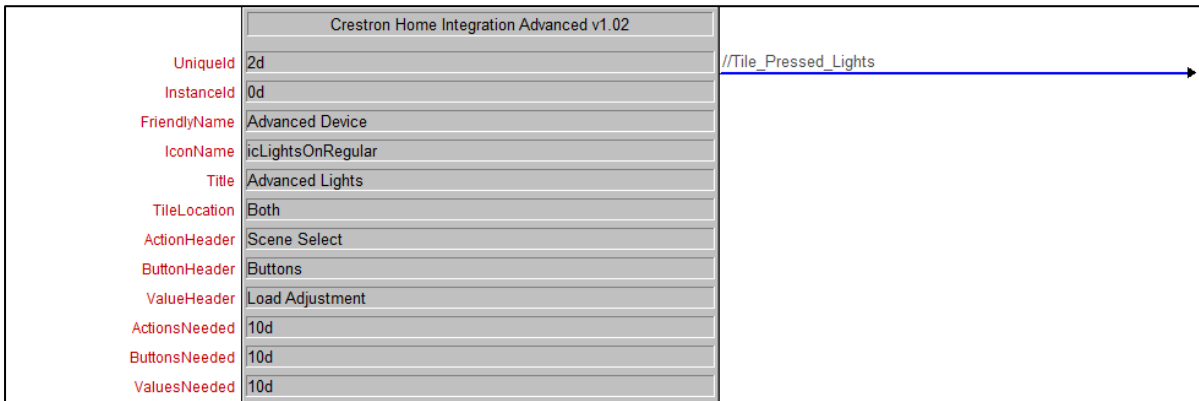
Tile Icon – Allows the user to input feedback for the tile icon, which can be used to update the icon when an action is performed, or a value changed.

Tile Status – enables status feedback to be passed to the tile. In the example below, the mode that the gate is in is passed to the tile and displayed accordingly.



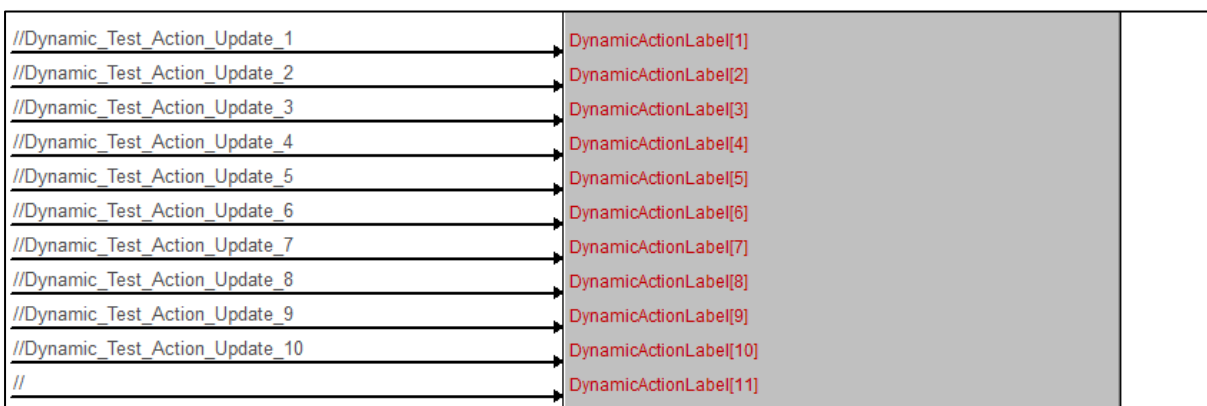
An Advanced Tile Example

The advanced keypad follows the same outline as the basic keypad above, with a few additions. For example, the addition of integer inputs for the number of actions, buttons and values needed. Shown below:



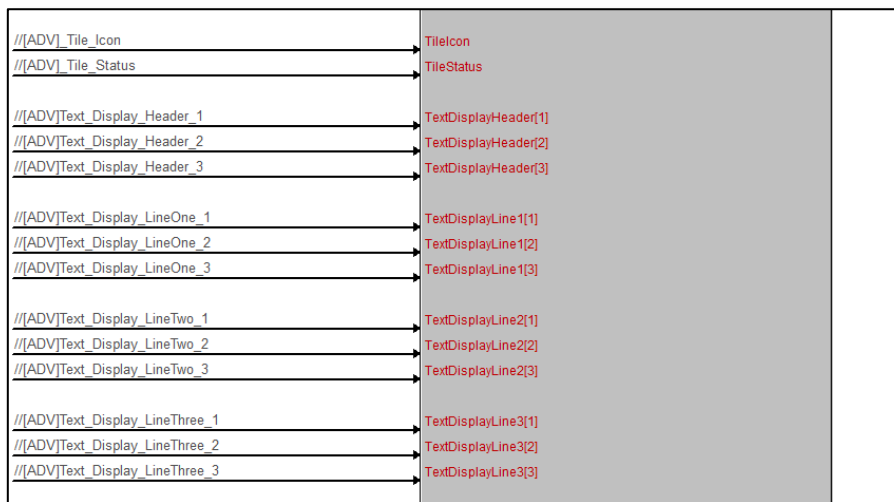
Unlike the basic tile, these integers are used to setup inputs. Meaning you aren't required to fill in the labels for each individually initially. Rather, these labels can be fed in via serial inputs. Making the labels dynamic. You could also set all to 0 which would disable the UI within the tile, creating a tile action with no internal navigation.

Additionally, sending a blank string down a serial input will hide the corresponding button, action, or value. Allowing it to be visually hidden from the user. An example of the DynamicActionLabel update serial inputs is shown:

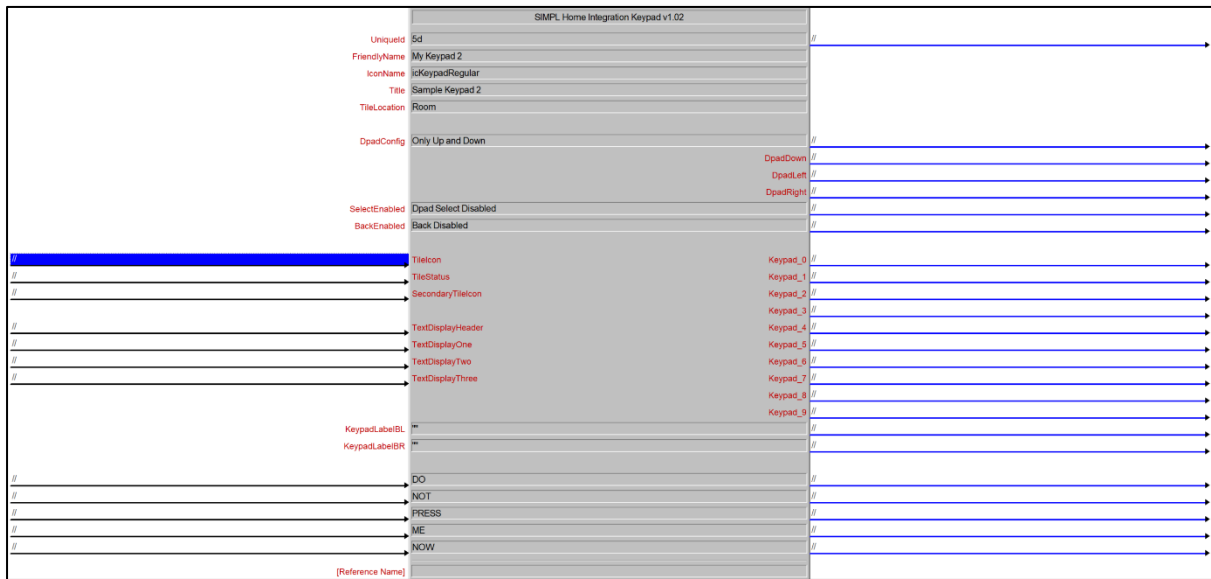


Similarly, the buttons can be disabled and reenabled using digital inputs, which correspond to their index.

Another addition to the advanced tile is the ability to send text to three text boxes displayed within the tile. The text box visibility is set by text within the display lines. Any text will cause the visibility to be enabled and sending a blank string will disable it. The headers do not affect the visibility.



A Keypad Tile Example:

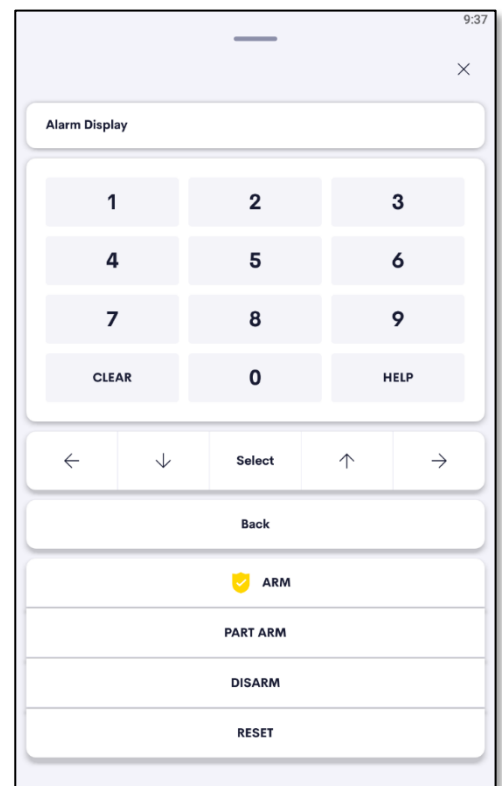


With the keypad device you can setup a standard keypad which has 11 actions. One for buttons 1-9 and 1 for the clear action and enter action. These can be linked up in Simpl Windows to your specific customisation. The input from these digital signals can be hooked up to the text display within CH for feedback. The header, and three lines of the text box are customisable. The header defaults to Input: and the rest are blank at setup.

There is also a Dpad available which you can hook up to Simpl Windows, this can be customised to include a select button or to show only the up and down arrows specifically. The options are given in the parameters DpadConfig and DpadSelect.

Additionally, you can setup a further 5 buttons to be customised as you wish within Crestron Home. Like action buttons in the basic tile, the icons and visibility can be set within Simpl Windows.

An example is shown here with all the buttons and the full Dpad.



A Thermostat Tile Example:

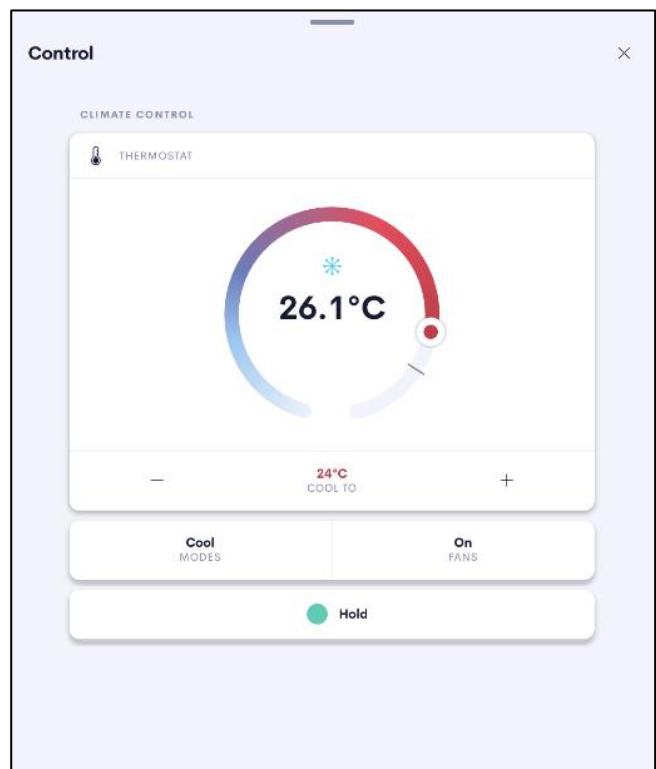
Crestron Home Integration Thermostat v1.02		
UniqueId	1d	
FriendlyName	Thermostat	
IconName	icClimateRegular	
Title	Control	
ClimateHeader	Climate Control	
FloorHeader	--	
HumidityHeader	--	
BoostHeader	Hold	
UnitSelect	Celsius	
RangeMin	0d	
RangeMax	30d	
[HVAC] Office-1 Mode_Is_Off_Fb	Off	[HVAC] Office-1 Mode_Is_Off
[HVAC] Office-1 Mode_Is_Heat_Fb	Heat	[HVAC] Office-1 Mode_Is_Heat
[HVAC] Office-1 Mode_Is_Cool_Fb	Cool	[HVAC] Office-1 Mode_Is_Cool
//	--	//
[HVAC] Office-1 Mode_Is_Auto_Fb	Auto	[HVAC] Office-1 Mode_Is_Auto
//	--	//
[HVAC] Office-1 Fan_Auto_Fb	Auto	[HVAC] Office-1 Fan_Auto
[HVAC] Office-1 Fan_On_Fb	On	[HVAC] Office-1 Fan_On
//	--	//
//	--	//
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[HVAC] Office-1 Floor_On_Fb	Floor_On_Fb	[HVAC] Office-1 Floor_On_Fb
[HVAC] Office-1 Floor_Off_Fb	Floor_Off_Fb	[HVAC] Office-1 Floor_Off_Fb
[HVAC] Office-1 Humidity_Fb	Humidity_Fb	[HVAC] Office-1 Humidity_Fb
[HVAC] Office-1 Humidity_Off_Fb	Humidity_Off_Fb	[HVAC] Office-1 Humidity_Off_Fb
[HVAC] Office-1 Boost_Icon_Fb#	Boost_Icon_Fb	[HVAC] Office-1 Boost_Request

With the Thermostat Device, you can integrate a thermostat with Crestron Home, through Simpl Windows. The thermostat module allows for 5 modes, fan settings and schedule settings to be input. There are also string inputs for passing in Icons and status feedback. These strings could be utilised to highlight when the Tstat is demanding heating or cooling, as an example. You can also input the desired icon on the Action or Boost button.

Further, there are also toggles and Raise and Lower inputs for attachments such as under floor heating or humidity.

Crestron Home UI currently has a bug that means Combi Modes aren't supported. As soon as they are supported, this will function as normal.

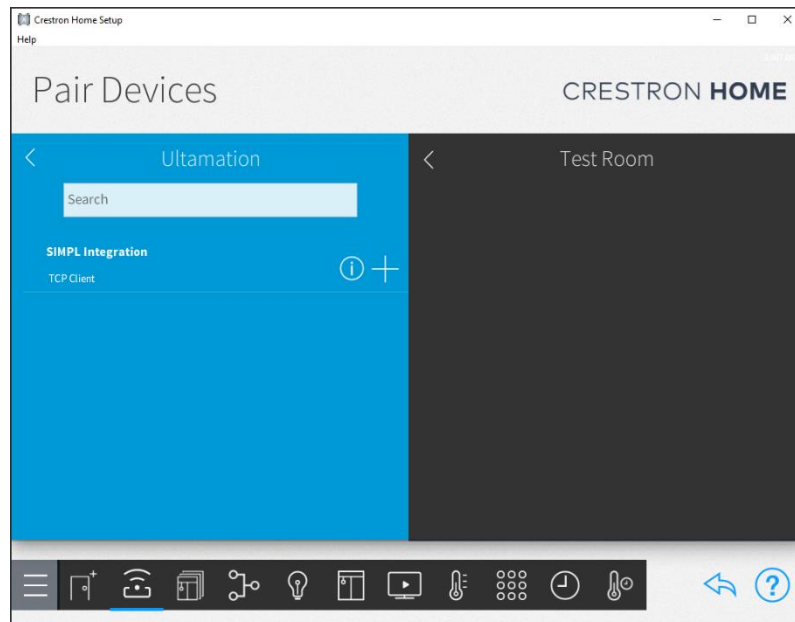
An example is shown here with the heat modes and fans on or off. As well as an action for holding the thermostat temperature.



Adding the SIMPL Home Platform Driver

After importing the driver, the SIMPL Home driver will be found under:

Devices > Platform > Ultamation > Simple Integration

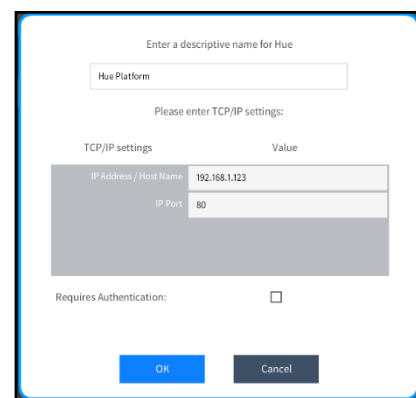


Ensure a room is selected, and then click on the '+' against the SIMPL Integration. The room can be ANYWHERE in the system and there will not be a visual tile added for the platform. To keep things organised you could add this device to a plant or equipment room.

You will be asked to provide a descriptive name for the platform driver (this can be anything you like) and the IP address of the Crestron Processor running the SIMPL Program.

The port can be left at the default value of 33333 unless your configuration specifically requires something different (in which case you will know what it should be set to).

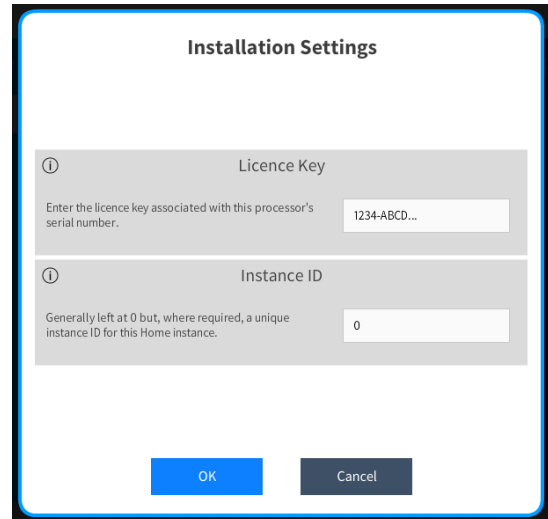
Requires Authentication should be left unchecked.



The platform device will be added to your system, and you will be asked to enter some more settings.

The field is for entering the licence key to ensure continued operation of the SIMPL integration. This licence key will be emailed to you upon successful payment of the product licence from the Ultamation shop.

If you do not enter a VALID licence key for your processor, the integration will function for 1 hour and then stop. Informational messages will be added to the processor's error log – please check here if you experience loss of function after an hour.

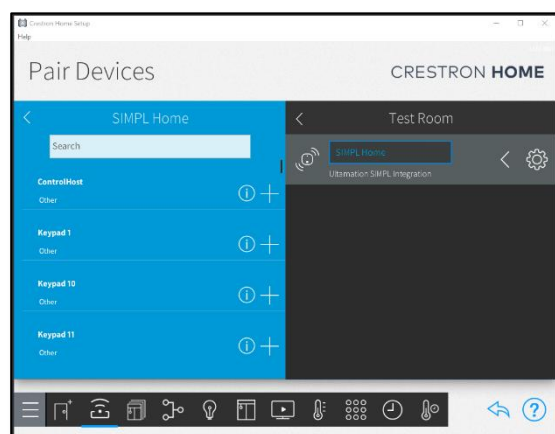
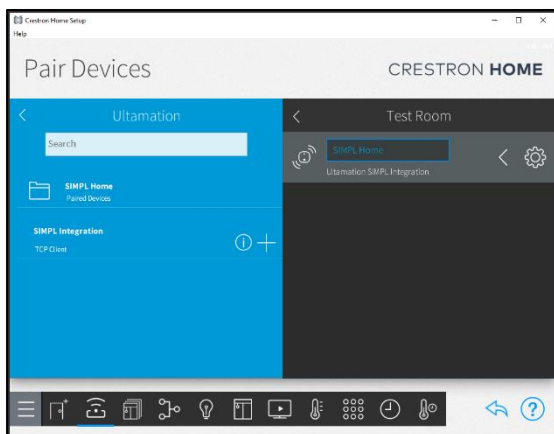


This is also where you enter an instance id if you would like to utilise one, refer to the SIMPL Module setup for a more detailed explanation.

Adding Devices

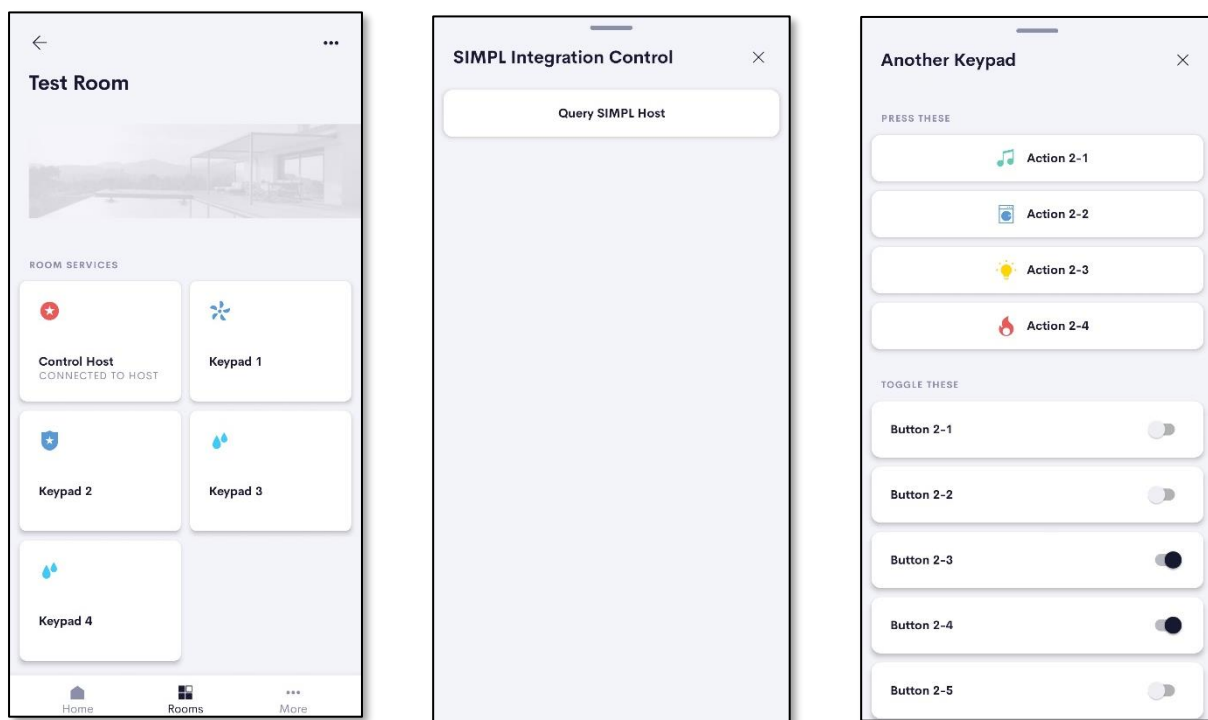
Once the SIMPL Home platform driver has been added to the system, it will start communicating with the SIMPL Windows Program and attempt to request information about the system.

All the devices which have been setup within SIMPL should now be visible within the SIMPL Home folder. Within which, all the devices setup within SIMPL Windows should be visible. In the example below, we setup 100 keypads which are visible, along with the Control Host device. Control Host enables the user to query the SIMPL Host Program for changes.



Device Setup Demonstration

In the example below, 4 keypads were added to a room along with the Control Host device. The devices display as tiles within the UI as normal within Crestron Home. The keypads provide a wealth of functionality, including action functions, button toggles and sliders. The amount of customisation is determined by the user within SIMPL Windows.



QUICK ACTIONS & SEQUENCES

Several functions are exposed to sequences via Crestron Home's quick actions.

Trigger Action

- ✿ The user can trigger an action with a sequence, this will perform whatever action has been set within the Simpl application
- ✿ Actions which have been set will appear within the folder Trigger Action for the user to select

Set Value

- ✿ This allows for a discrete value to be set on a slider.
- ✿ The user can select the device or feature which they wish to control, for example a bulbs brightness or hue, from the drop-down menu. Then, a discrete value can be set for the slider. This is within the standard range of

Slider Toggle

- ✿ If enabled within Simpl Windows, the user can use this quick action to select a particular slider and set its state. There are 3 states, Set, Reset and Toggle.
 - Set will toggle the state high
 - Reset will toggle the state low
 - Toggle will toggle to the opposite of the current state

Toggle Button

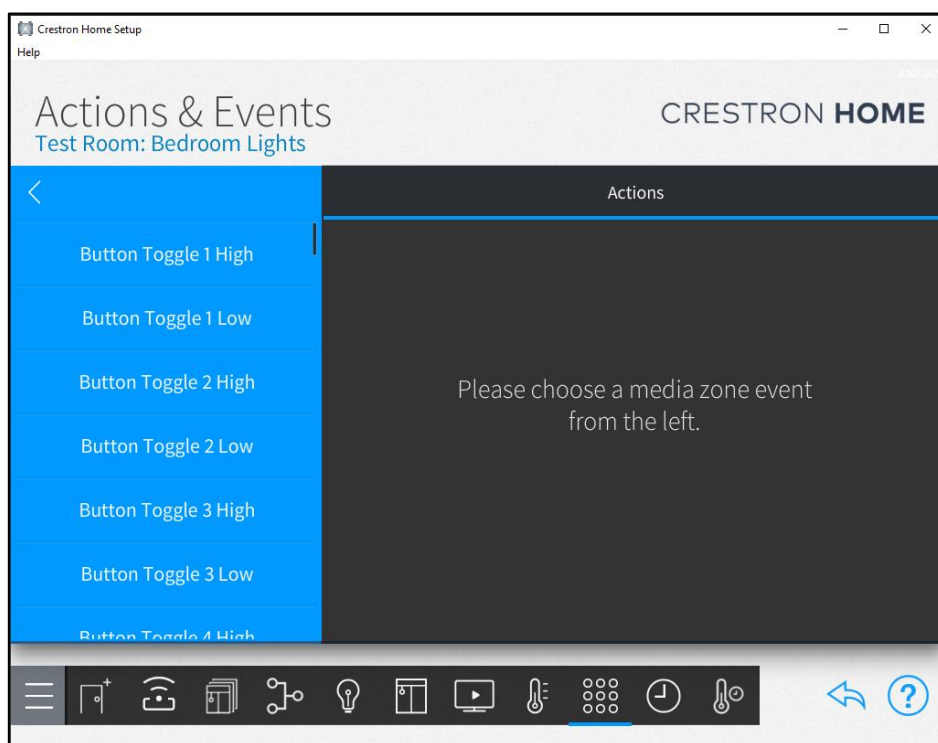
- ✿ If enabled within Simpl Windows, the user can use this quick action to select a particular button from the drop down and set its state. There are once again 3 states, Set, Reset and Toggle.
 - Set will toggle the state high
 - Reset will toggle the state low
 - Toggle will toggle to the opposite of the current state

Trigger Tile

- ✿ This quick action will perform whatever function a tile press has been set to perform within the Simpl Windows Application

EVENTS

As there is an abundance of possibility within SIMPL Home, there are several events accordingly. For each button state or slider toggle state, there is an event which can be triggered high or low. There is a maximum number of 20 buttons and 20 toggles, each has an event representing their two states (high or low). This means there is a total of 80 events which can be utilised within Crestron Home.



SUPPORT

If you have any issues with a driver or installation please let us know by contacting Ultamation support on support@ultamation.com and please include as much detail about your issue as possible, such a recent processor error log.

LICENCE

This module (including software, images and any and all other associated assets distributed as part of the purchased download package) is licenced on a PER PROCESSOR basis.

A licence key is generated at the point of purchase and is linked at that time to specific information that MUST be provided at the time of purchase. A purchase should not be completed without correct information as refunds cannot be issued for errors or changes made to details following purchase.

The licence key for each device will be delivered via email along with links to download the module. There is no physical delivery.

The module is provided without any warranty with respect to the reliability of the controlled device or changes to device protocol. We will endeavour, through best efforts, to maintain the module's functionality and any bug fixes will be provided free-of-charge. Additional functionality may be released as a variation of this module and this will be a separate, purchasable, product.