Warm Floor TH-05, Home Assistant and Homekit

This document describes how to enable TH-05 warm floor thermostat with Home Assistant and then into Homekit.

Step 1)

Download and install the smartlife app from the app store. You'll need to setup an account.



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	• Connect your phone to the below:	notspot shown		
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Ghz	✓ SmartLife-XXX	кх	×	
our	✓ SL-XXXX		Connect	ing Device
rk. See			Power or	n the device.
and image	 Go back and add devices. 			
				a
	Incorrect hotspot. Please ver	ify and try again.	01	.59
	Reconnect		01	
		_		
			Scan Ri devices. on	©C egister Initialize Cloud. the device.

Step 3)

- 7. Make sure your WiFi is set to 2.4 Ghz
- 8. You'll seen a prompt to connect your phone to the Smartlife wifi network. See imaged on right.
- 9. Go into your phones wifi settings and connect to Smartlife network, see image below.

10. Press "Device Added Successfully."

Wi-Fi

11. You can use the pencil to rename the device to something like the room its in, ie "Warmfloor Bathroom"

.11 3G 🕗

∻ (i)

Edit

12. Press "Done"

4:58 ┥

Settings

Wi-Fi

✓ SmartLife-2A85 Unsecured Network

Your device should now automatically reconnect with your phone each time the app is launched and you are with range of the network.



Step 4) Install and setup Home Assistant.

Follow the instructions on <u>https://www.home-assistant.io/installation/</u>

My own build is a raspberry PI 3B computer with corresponding home assistant image installed on a SD card. The setup and install is pretty straight forward for anyone who is familiar with PCs and has had a wee play with linux. Its mostly follow your nose and you don't need to be a guru.

You might want to install the Home Assistant app for iOS on both iPhone and iPad. You can also use the web interface on homeassistant.local:8123/

Step 5) Setup and install localtuya

This is a little more complex, as you need to setup a tuya development account to obtain the device keys, which are then used in tuya local. The nice thing with tuyalocal is you dont need to have an internet connection to use the warmfloor integration.

Follow instructions on <u>https://github.com/rospogrigio/localtuya</u>

Note the account you setup within the smartlife app you would have to do in steps 1 is not the same as the development account, although they can share the same email address.

The above instructions refer to the below to setup the development account <u>https://www.home-assistant.io/integrations/tuya/</u>

Make sure you choose the right datacentre when your doing the setup. For new zealand which is where TH-05 are made, its Western American Datacenter.

As part of the above steps you'll link your smartlife app account to the development account.

Key thing which is a little burried in the above is how to get the tuya Key for the warmfloor device.

Once you have followed all the instructions above, see below screen shots on how to find the key. The red highlighted bit below is how you find the key, using the API explorer, and "Query Device Details"

			រ្វសិ loT Platform 🕖	API Explorer	Tuyla Devices Switch	Project 🛊	Engl	ish(EN) 🔻
τυγο	of Platform		arch Q	Query [Jevice Details ③			
	Cloud	Hello	Space Management Device Management Get Status Reporting Lo	Parame	ter(Request Method: GET)			
2	Development		Get Update Progress Query Device Details in	• device	id () :		Response	
Product	Cloud Services		Delete Device				4	
	API Explorer		Get Update Information				"result": { "active_time": 1690693128, "active_time": http://	
Арр	Data Statistics	Davis	Confirm Start of Update				"create_time": 1690693128, "custom_name": "',	
Cloud	Usage	Deve	Get Device State				"icon" "	
	API Statistics	smart ts. Yoi	Get Operation Log Modify Basic Properties				"is_online": true, "lat": "-42.48	
Data	Message Statistics	e desir elopmi	Freeze/Unfreeze Device				"local_keette "	
R	Cloud Monitoring	arn Me	Transfer Device Restore Factory Defaults				"nobel:""爱迪生TFT智能温控器-测试版本 2", "product_id":"rpefla4ifsmq4bbd",	
Operation	Server Message L		Query Devices in Space				"product_name": "夏迪生-TFT智能温控器-潮试版本", "sub": false, "time_zone": "+12:00",	
Purchase	API Log		Device Group				"update	
VAS 7	SaaS Development 🔺	3d	Scene Linkage Rules Device Control(Standard Instruction Set)				"success" "t": "tid":	
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Step 6) Modify the tuya install to support the TH-05. This is a little tricky.

If your familiar with a shell terminal, then in addins suggest you install "Terminal & ssh" its a nice little terminal emulator. Otherwise the easier one to do is "File Editor" that has a fairly straight forward front end when you "Open Web UI".

Use "File Editor" to navigate custom_components\localtuya\climate.py

in climate.py insert the below red lines. Tip, make sure the quotes don't change on you to the ones which are a on a angle

```
HVAC_MODE_SETS = {
    "hand/auto": {
        HVAC_MODE_HEAT: "hand",
        HVAC_MODE_AUTO: "auto",
    },
    "manual/auto": {
        HVAC_MODE_HEAT: "manual",
        HVAC_MODE_HEAT: "manual",
        HVAC_MODE_AUTO: "auto",
    },
```

Once done the above and saved, restart home assistant.

Step 7)

IMPORTANT: First set the thermostat via the thermostat control panel to manual heating and a set temperature higher than the current on. If you dont do this, then you dont get some of the options in some of the steps below, which means you cant successfully configure the integration.

Install the Thermostat in local tuya by following the below screen shots.



Loc	calTuya		
	🙆 local tuya 👘	Integration entries	
٩	Custom integration	localitys confloate	1
0	5 devices >	ADD ENTRY	
â	5 entities >		
山谷花	Add a new device Pick one of the automatically of device. Discovered Devices @ \$3:4::1FT\$%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%	Constraints or to manually to add a	
		SUBMIT	

		•••	🕈 🗢 53% 🗖
LocalTuya			
🙆 loca	l tuya	Integration entries	
Custom integrati	on	5 devices and 5 entities	
o 5 devices	>	ADD ENTRY	
≜ 5 entities	>		
III Documentation	Z		
👹 Known issues	Entity type	e selection 🕜 🗙	
羲 Enable debug lo	Please pick the	type of entity you want to add.	
	Platform* climate	•	
		SUBMIT	

alTr	Fill in the device details.
	Name* Warmfloor Upstairs
t් ස් Cus	Host* 192.168.0.107
5 d	Device (D*
5 e Doi	Local key* Key goes here
Kno	Protocol Version
Ena	3.1
	3.2
	3.3
	0 3.4
	Enable debugging for this device (debug must be enabled also in configuration.yami)
	Scan interval (seconds, only when not updating automatically)
	Manual DPS to add (separated by commas ';) - used when detection is not
	DPIDs to send in RESET command (separated by commas ',)- Used when de
	SUBMIT

The below error seemed to happen sometimes, not sure why. Could be if you have the smartlife app open when trying to do the below. Retrying and/or closing the smartlife app seemed to fix it for me.

,	Connection to device avecaded but no detensints found alcose try applied
. C	Create a new issue and include debug logs if problem persists.
Name Wari	* mfloor Upstairs
Host* 192.	168.0.107
Devic	
Local Key	^{key*} goes here
otoc	ol Version
\cap	31
U	0.1
0	3.2
0	3.2 3.3
0 0 0	3.2 3.3 3.4
	3.2 3.3 3.4 Enable debugging for this device (debug must be enabled also in configuration yaml)
 C C C Scar 	3.2 3.3 3.4 Enable debugging for this device (debug must be enabled also in configuration yaml) n interval (seconds, only when not updating automatically)

Its very important that the below settings are selected. Particularly

"Temperature step" 1 is important for correct response, and you should be able to choose the "hand/auto" HVAC Mode as shown below (which is enabled by the previous step 6).

Local	Warffffööf Upstairs	
é	Target Temperature 2 (value: 32)	
🌚 c	Current Temperature 3 (value: 26)	18
[<u>.</u>	Temperature Step (optional)	
a ₀ !	• 1	
<u>IIV</u> 1	0.5	
Ŭ	0.1	
	Max Temperature (optional)	
	Min Temperature (optional)	
	Precision (optional, for DPs values)	
	1	
	0.5	
	0.1	
	HVAC Mode DP (optional) 4 (value: hand)	
	HVAC Mode Set (optional) hand/auto	

Step 8)

The easy bit is setting it up in homekit. You'll need to configure homekit bridge within Home Assistant, ensure "Climate" is selected as part of domains to include when you run the homekit configuration.

Once you have done this you should see the TH-05 appearing in your default room in Homekit (if not, try reloading the homekit bridge configuration with the 3 dots).

Limitations.

Unfortunately you cant directly control the aux heater (such as a heated towel rail). What ive done is set the aux function in the TH-05 to always be on, so it comes on when the floor tiles start heating up.

Note:

Within TH-05 lve set all schedules for the main heating to be off as its all controlled as ive described below.

Uses:

Below is a screen shot of one of my home kit automation rules. It checks for presence to see if we are home, if the toggle described lower down is on, and the temp is <18 degrees.



The reason one portion says custom condition is the rules are configured in eve. The eve app provides some additional functions homekit doesn't support directly, however the automations dont always display correctly in homekit.

The key bit is the automation is primed to trigger when a toggle kicks in. This a toggle is created in home assistant, and driven via a schedule helper and a automation rule to turn on and another to turn off. Screen shots below.

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***	? 29%
- Warmfloor Upstairs On	TRACES
Triggers	0
$\checkmark \bigwedge_{i=0}^{n}$ When Warmfloor Upstairs Schedule changes from Off to On	:
+ ADD TRIGGER Conditions	Ø
+ ADD CONDITION Actions	Ø
Call a service 'Input boolean: Turn on' on Warmfloor Unstairs Torrole	:

The final rule I have which is pretty cool for marital buy into these kinds of things.. It sends a notification to the wifes iPhone telling her when the bathroom is nice and warm.

•••		? 14% 💽
\leftarrow Shower Time		TRACES
✓ ♣ When Current temperature of Warmfloor Upstairs changes from 28 to 29		:
+ ADD TRIGGER		
Conditions		0
✓ ♣ Confirm Shower Toggle is Off		:
+ ADD CONDITION		
Actions		0
▲ Call a service 'Notifications: Send a notification via mobile_app	one' on	:
Service Notifications: Send a notification via mobile_app		× •
Sends a notification message using the mobile_app_lenyis_iphone integration.		0
message	Hi Love, shower is nice and warm. Love Siri	
✓ title	Shower Time	
target	1	
🔲 data	1	
✓ ▲ Call a service 'Input boolean: Turn on' on Shower Toggle		: