This is the Home e-paper screen v2 guide.

New on v2 :

- Use it with or without touch screen.
- First install is easyest
- Update if new version is available by web page (no need arduino IDE)
- More customize your display than the v1
- Choose about 51 icons
- Control device with touch screen
- Display value is optimized than v1
- Card action need to display values are (very) reduced
- Button on board are implemented
- And few little options…

Installation :

You have 2 possible way to install Homey e-paper v2 :

- With Arduino IDE
- With esptool

Arduino IDE :

Download arduino IDE (1.8.X or 2.X), and install ESP32 board.

If you don't know how install ESP32 board in Arduino IDE you can follow this guide :
https://randomnerdtutorials.com/installing-the-esp32-board-in-arduino-ide-windows-instructions/

Install AsyncElegantOTA library in the manager library.
Change SSID and PASSWORD in the code and upload with this parameters.
Be sure « Erase all flash content... » is enable to clear all the memory.
(If you are on Windows, you can set Upload Speed to 921600):

Then dowload the Homey e-paper .bin file here :
To install it, go to http://IP ADRRESS OF YOUR ESP32/update
you will have the page bellow. Select 'Firmware', choose the .bin file and upload will start automatically.
That all ! See your Homey e-paper screen to continue.

Esptool :

Updating :

If new version is avalaible. To install it go to
http://IP ADDRESS OF YOUR ESP32/Update.
Select 'Firmware' an choose the .bin file of version you want to instal.

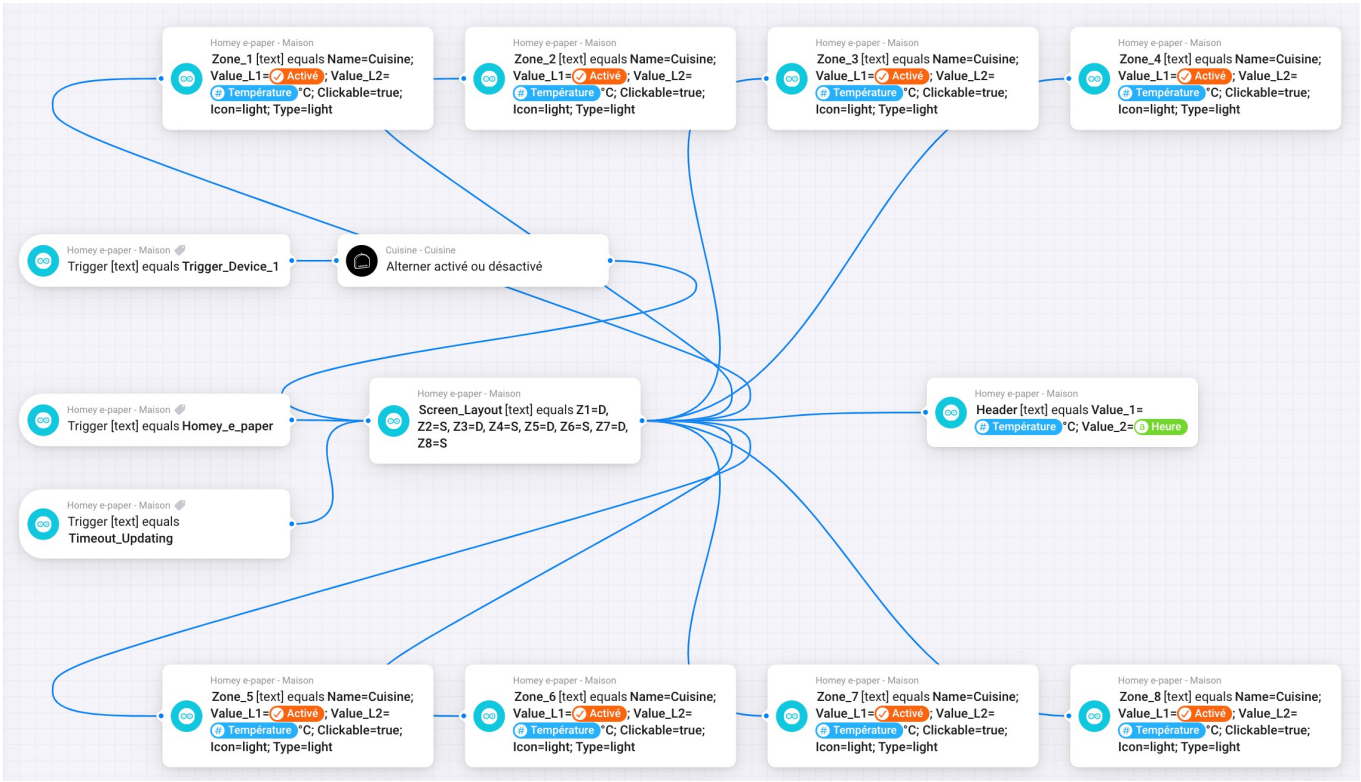
Connect to Wifi :

Normally, you will show a screen tell you to connect to wifi. Select the Wifi network or scan QR code (on iPhone, you need unlock your iPhone before scan QR code. Dont know about this on Android).
Wait for the captive portal ask you WiFi settings. Set and send them.

Integration in Homey :

Download Homeyduino app on the Homey store.
Add a device like a classical device and Homeyduino will automatically detect Homey e-paper.

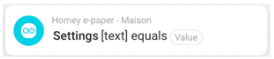
Example of flow :

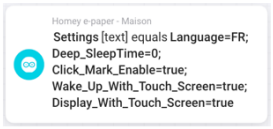


Specification of differents cards you will found :

Settings card :

This card need to be call just one time when you need it (first start, or change settings). All values are saved and recovered at each startup





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Options	Possible values	Default value	Example	Description
Language=X;	EN, FR, NL	EN	Language=FR;	Select your language (English, French, Dutch)
Deep_Sleep_Time=X;	time in minute. 0 to … (0 need a touch screen)`	5	Deep_Sleep_Time=5;	Time between 2 wakes up of the Homey e-paper. Need to be >1 without touch screen. 0 and «Wake_Up_With_Touch_Screen=true; » wake up Homey e-paper by touch the screen. 0 and «Wake_Up_With_Touch_Screen=false; » disable deep sleep
Time_Before_Sleep=X;	Time in seconde 0 to...	0	Time_Before_Sleep=1;	Time must wait Homey e-paper before enter in deep sleep. (this is only of interest with a touch screen in order to carry out actions.)
Click_Mark_Enable=X;	true or false	false	Click_Mark_Enable=true;	This draw clik mark on the top right of each device has the param « clickable » (see it on « Zone » section)
Wake_Up_With_Touch_Screen=X;	true or false	false	Wake_Up_With_Touch_Screen=true;	Wake up Homey e-paper by touch the Screen (need a touch screen). Can be false only if you set a deep sleep time > 0 to disable Deep sleep
Display_With_Touch_Screen=X;	true or false	false	Display_With_Touch_Screen=true;	Define if a touch screen is present

Important:
- Be careful to use « ; » to separate the values.
- Do not use space after « = » .
- No « ; » after latest value .

Example of full settings: Language=FR; Deep_SleepTime=0; Click_Mark_Enable=true; Wake_Up_With_Touch_Screen=true; Display_With_Touch_Screen=true

Battery_Calibration card :

This card is create to get accuracy value of the battery percent calculated.
It need to be call just one time when you need it (first start, or change settings). All values are saved and recovered at each startup

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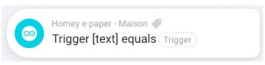
Options	Possible values	Default value	Example	Description
Voltage_Min=X;	Number	3.2	Voltage_Min=3.18;	Set the minimum voltage measured when the battery is empty
Voltage_Max=X;	Number	4.2	Voltage_Maxi= 4.25;	Set the maximum voltage measured when the battery is full

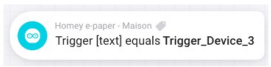
Important:
- Be careful to use « ; » to separate the values.
- Do not use space after « = » .
- No « ; » after latest value .
- Voltage value must have point « . » not a comma « , »

Example of full settings: Voltage_Min=3.18; Voltage_Maxi=4.3

Trigger card :

This card send a trigger to Homey to start any action





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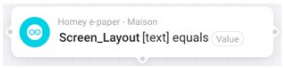
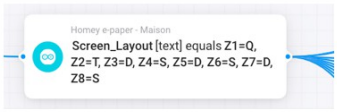
Trigger's name	Description
Homey e-paper	On each startup, Homey e-paper send a trigger. Use it to start a flow.
Trigger_Device_1 to Trigger_Device_8	Need a touch screen. When you touch a device, it will send a trigger to Homey
Release	Trigger sent at each startup with a tag of the installed release. You can compare it with the one available on github. (See « others » for more)
Trigger_Button_1 to Trigger_Button_3	When button 1, 2 or 3 has been pressed, a trigger is send to Homey. Use it to trigger what you want.
Timeout_Updating	Triggered when the time to update values to display take more than 20 seonds. For eg. It can be use to restart the update.

Screen_Layout card :

This card need to be call every time AND before all Zone_X cards to define the layout's display.





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Options	Possible values	Default value	Example	Description
Z1=*; Z2=*; Z3=*;...	S, D, T, Q, X	None	Z1=T;	S = a Simple tile D = a Double tile T = a Triple tile Q = a Quadruple tile X = not usable zone

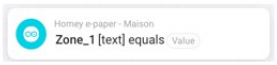
Important:
- Do not use space after « = » .
- You need to define all values.
- Separate values is not mandatory, the code only search « = » and take the first value follow it.

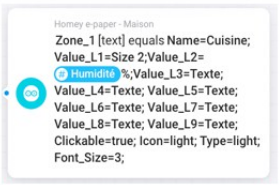
Example of full settings: Z1=Q; Z2=T; Z3=D; Z4=S; Z5=S; Z6=S; Z7=D; Z8=S

Note :
4 zones per line. Line 1 = Zone 1 to Zone 4. Line 2 = Zone 5 to Zone 8.
The code will take care of errors if there are any in order to produce a correct display.
In the example above, Z1 is Quadruple and it take space of Z1, Z2, Z5 and Z6.
So Z2 can not be Triple, Z5 and Z6 can not be Simple. The code will automatically set Z2, Z5 and Z6 to X.

Zone_X card :

This is the card to display values to the screen, with differents params.



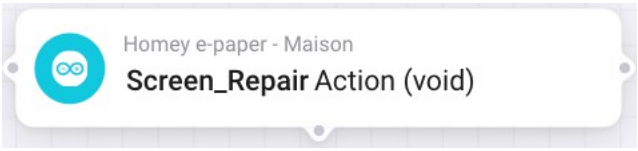


Options	Possible values	Default value	Example	Description
Name=X;	Name of your device	Empty	Name=Kitchen;	Display any name you want
Value_L1=X; Value_L2=X;	A value to display	Empty	Value_L1=Hello; Value_L1= [a tag];	Display any value you want
Value_L3=X; Value_L4=X; Value_L5=X; ...	A value to display	Empty	Value_L3=Hello; Value_L3= [a tag];	To show it, need to define zone in Quadruple mode (Eg : Z1=Q. See Screen Layout)
Clickable=X;	true or false	Empty	Clickable=true;	Need a touch screen. If it's true, it will send a trigger to Homey. (See Trigger)
Icon=X;	Name of icon to display (see icon list)	Empty	Icon=gate;	See icon list to know wich icon are possible to display
Type=X;	light, door, heater, onoff, presence, yesno, lock	Empty	Type=door ;	If you choose a state tag device, Homey return « true » or « false ». For example to show « Open » for true or « Close » for false, Select type=door.
Font_Size=X;	1 to 5	1	Font_Size=3 ;	Select font size. if this is not specified the default is 1. 1 is the smallest, 5 the biggest. The larger the size, the fewer characters it is possible to display.

Important:
- Be careful to use « ; » to separate the values.
- Do not use space after « = » .
- No « ; » after latest value .

Example of full settings:
Name=Cuisine; Value_L1=Hello;Value_L2=[tag humidity]%;Value_L3=Texte; Value_L4=Texte; Value_L5=Texte; Value_L6=Texte; Value_L7=Texte; Value_L8=Texte; Value_L9=Texte; Clickab

Screen_Repair card :



If you get wrong display or if you see previous image you can call it.

Special option for touch screen :
By long press on the header, you will run Screen Repair