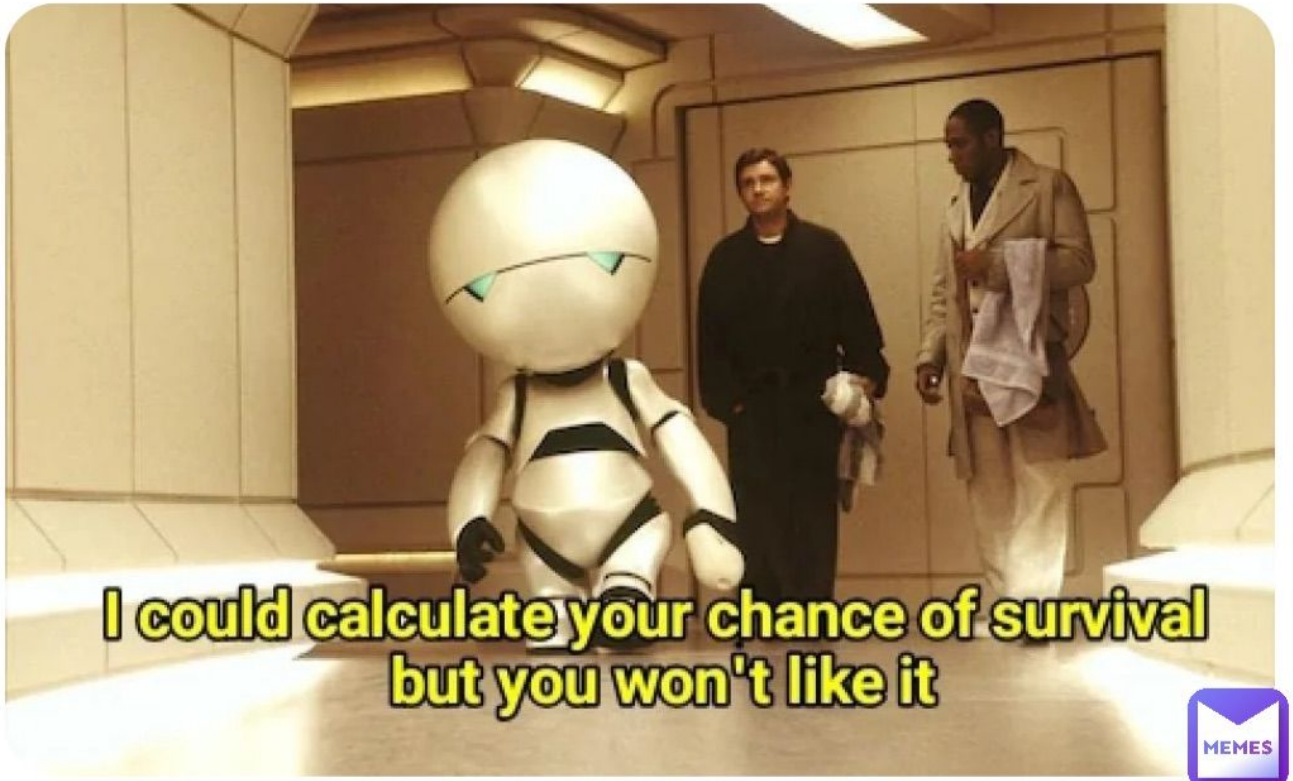
Home Automation

The Sequel

When robots take over the world

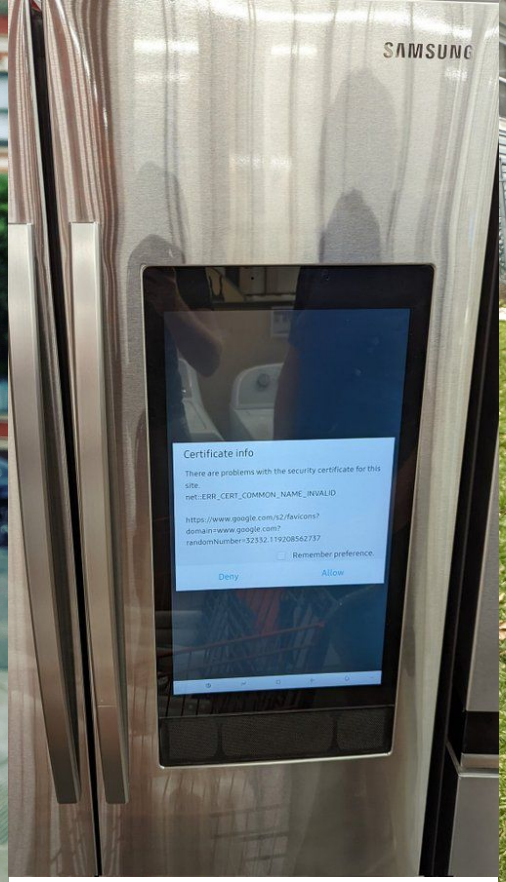


Recap

Connected Everything




HELLO!
DID YOU LEAVE A PRINTER HERE THIS MORNING? (Monday, July 3)
I GOT IT WORKING AND PRINTED THIS.
BUT I CAN'T USE SOME OF THE FEATURES UNTIL YOU REMOVE IT FROM YOUR HP ACCOUNT.
CAN YOU PLEASE TAKE A MOMENT TO LOG IN AND REMOVE THE PRINTER FROM YOUR ACCOUNT.
hpsmart.com
THANK YOU AND HAVE A WONDERFUL DAY!
Done! 7/6
enjoy


SAMSUNG
Certificate info
There are problems with the security certificate for this site.
net::ERR_CERT_COMMON_NAME_INVALID
Remember preference.
Deny
Allow

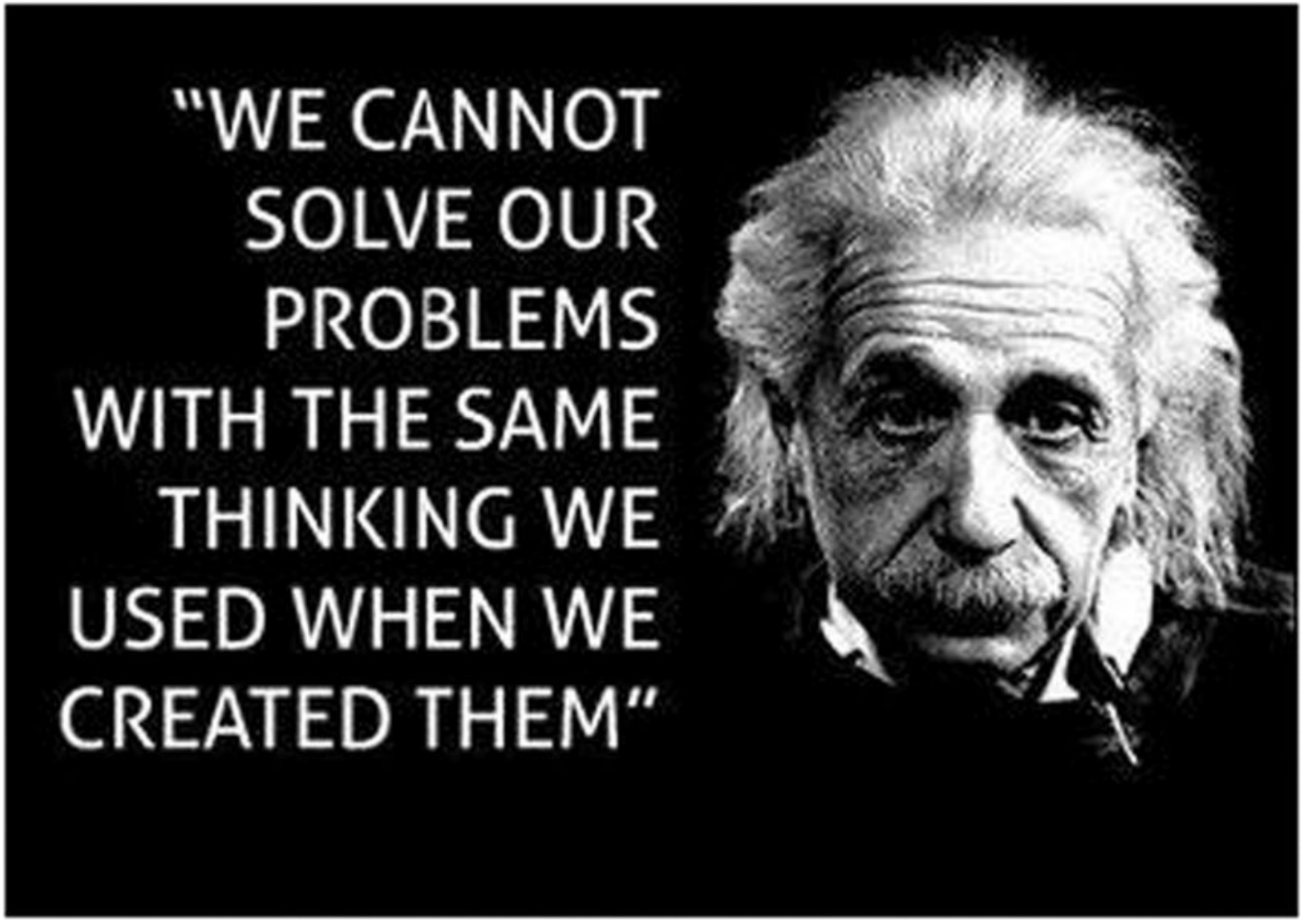

CAMP CHEF
UPDATE 17
P1
P2
WIFI
P1
P2

The Rules

- ➔ Must keep existing functionally if it's norm
- ➔ Must IoT can operate without internet (bonus without power!)
- ➔ Must Be flexible in configurations
- ➔ Should do periodic review automations
- ➔ When breaking a rule, make it exceptional

What has changed?

That’s why I’m here today


"WE CANNOT
SOLVE OUR
PROBLEMS
WITH THE SAME
THINKING WE
USED WHEN WE
CREATED THEM"

Some of those problems…

- ➔ More foot traffic
- ➔ More people so more keys had to be made
- ➔ Gone for longer periods
- ➔ Water flooding?!

The Extended Rules

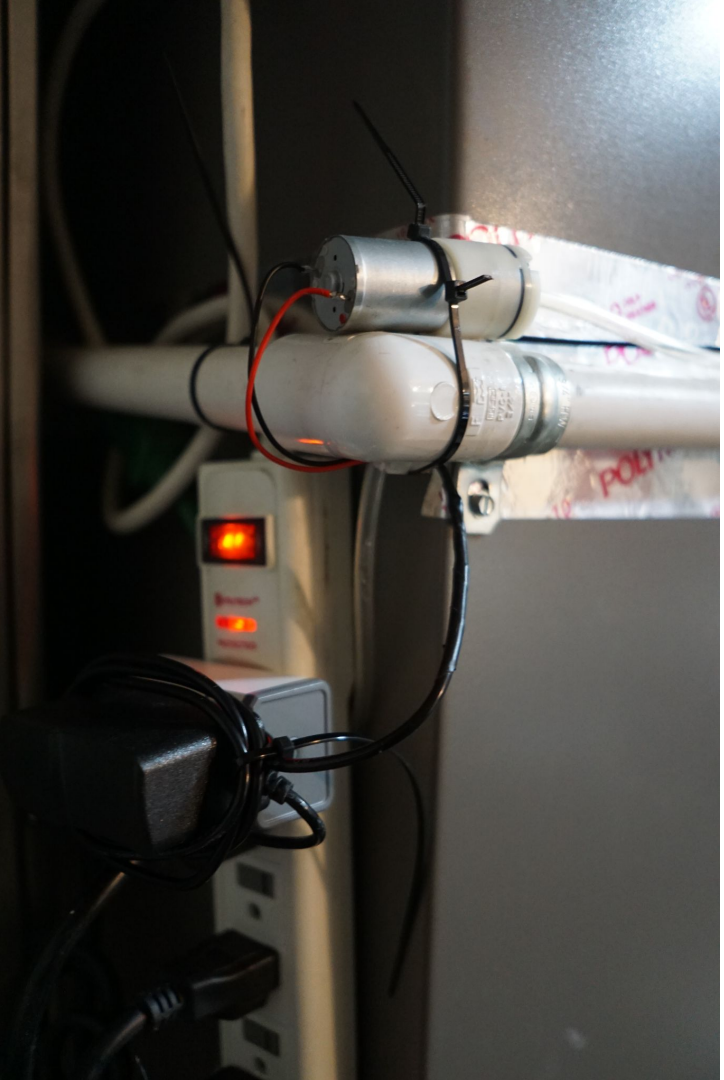


STILL “GUIDELINES”

The Extended Rules

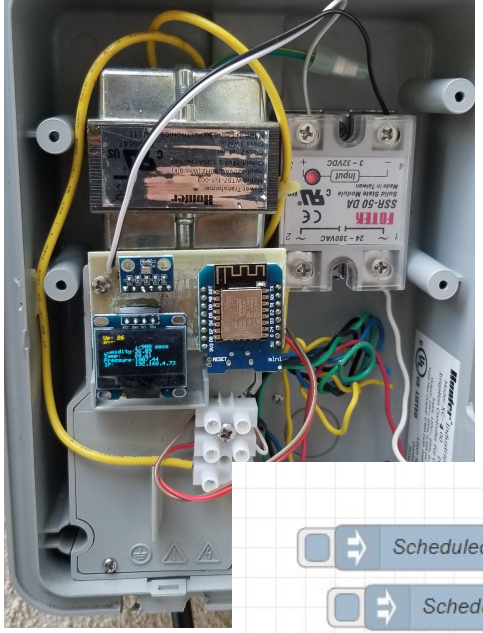
- ➔ Must have an API when using cloud service connected device with logs.
- ➔ Should keep common configurations in one location
- ➔ Should provide multiple ways to interact with the smart home (app, alexa, QR codes, NFC tags)
- ➔ Should Identify common tasks that can become a routine
- ➔ Should use pub/sub events such as MQTT
- ➔ Should only use batteries if the device can last 1 year plus

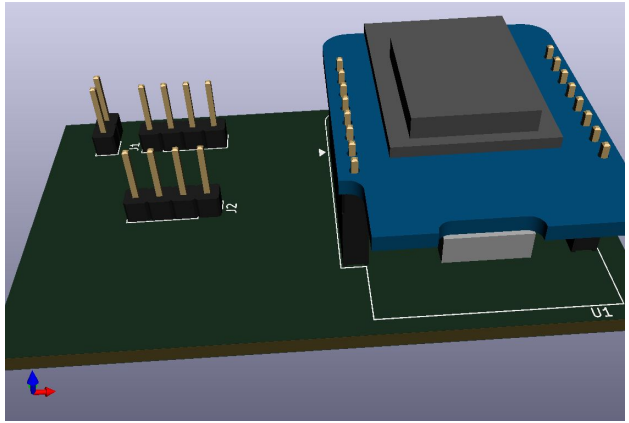
Examples











Generic Module

Sprinkler

BME280 Temperature	32.9 °C
BME280 Humidity	18.4 %
BME280 Dew point	5.7 °C
BME280 Pressure	1005.2 hPa

OFF

Toggle

Configuration

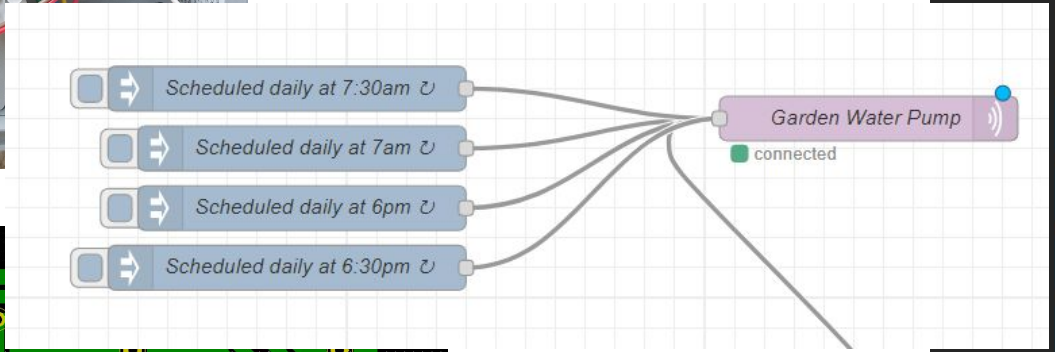
Information

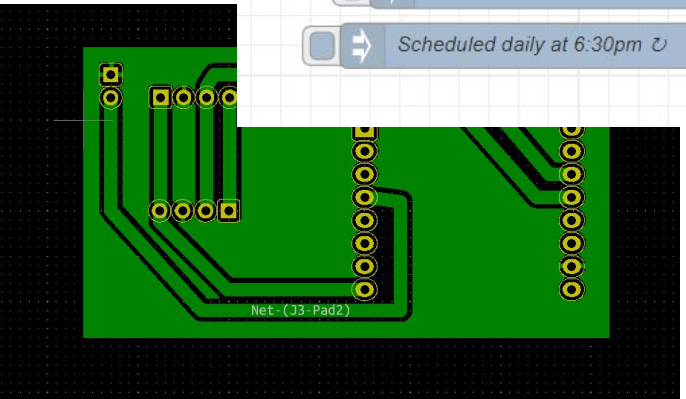
Firmware Upgrade

Console

Restart

Tasmota 8.3.1 by Theo Arends










airgradient
PCB v2
Powerful Air Quality Solutions
www.airgradient.com
www.airgradient.com/diy
CO2 Sensor
PM Sensor
Microcontroller
PMS5003
OLED
0.96" 64x48

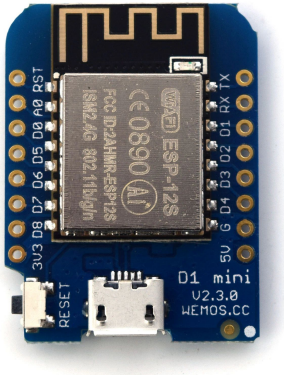

1:49
Home
Status
Garage Door Closed
Weather
75F
69%
Door Lock
Front Door
Vacancy Mode
Normal
GARAGE DOOR TOGGLE
UNLOCK SIDE
TOGGLE LOCK FRONT
ALL LIGHTS OFF
ALL LIGHTS ON
TV Backlight Brightness
Room Brightness
Coffe Bar Color
Cold to Warm
Backyard Light
Entrance Light
Master Light
80



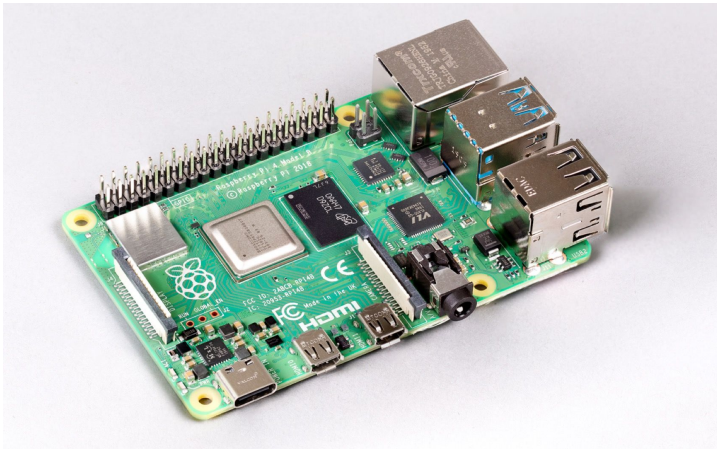

SCHLAGE


Unlock with Password
Unlock with App
Unlock with M1 Card
1 2 3
4 5 6
7 8 9
* 0 #
Card
Smart Security·Innovate

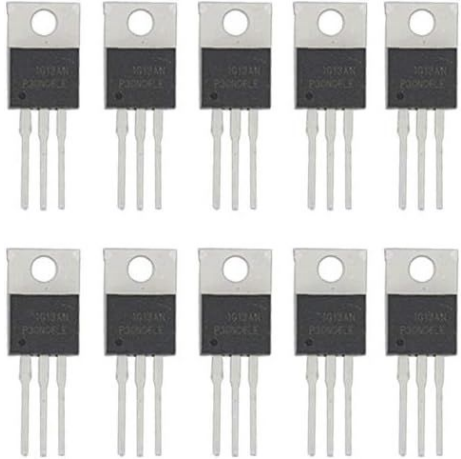
Hardware

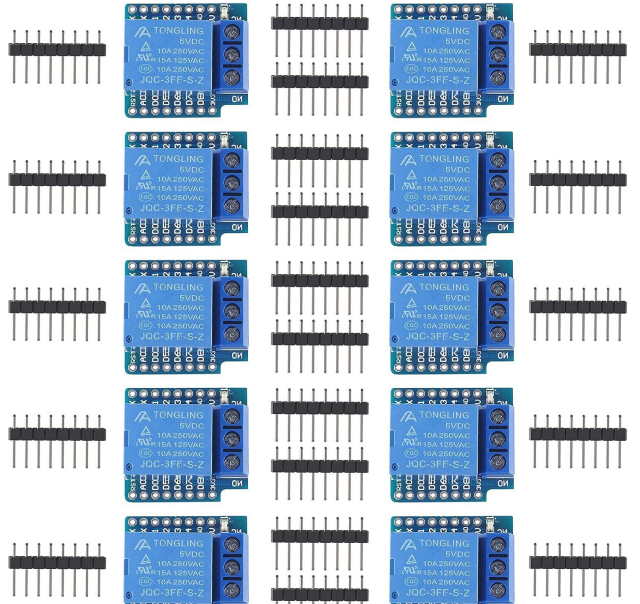

ESP-12S
D1 mini
V2.3.0
WEMOS.CC
RESET






Light Dancing with Music
DIMMABLE
Microphone Mode
RGB LED STRIP LIGHTS
100FT




TONGLING
5VDC
10A 250VAC
JQC-3FF-S-Z

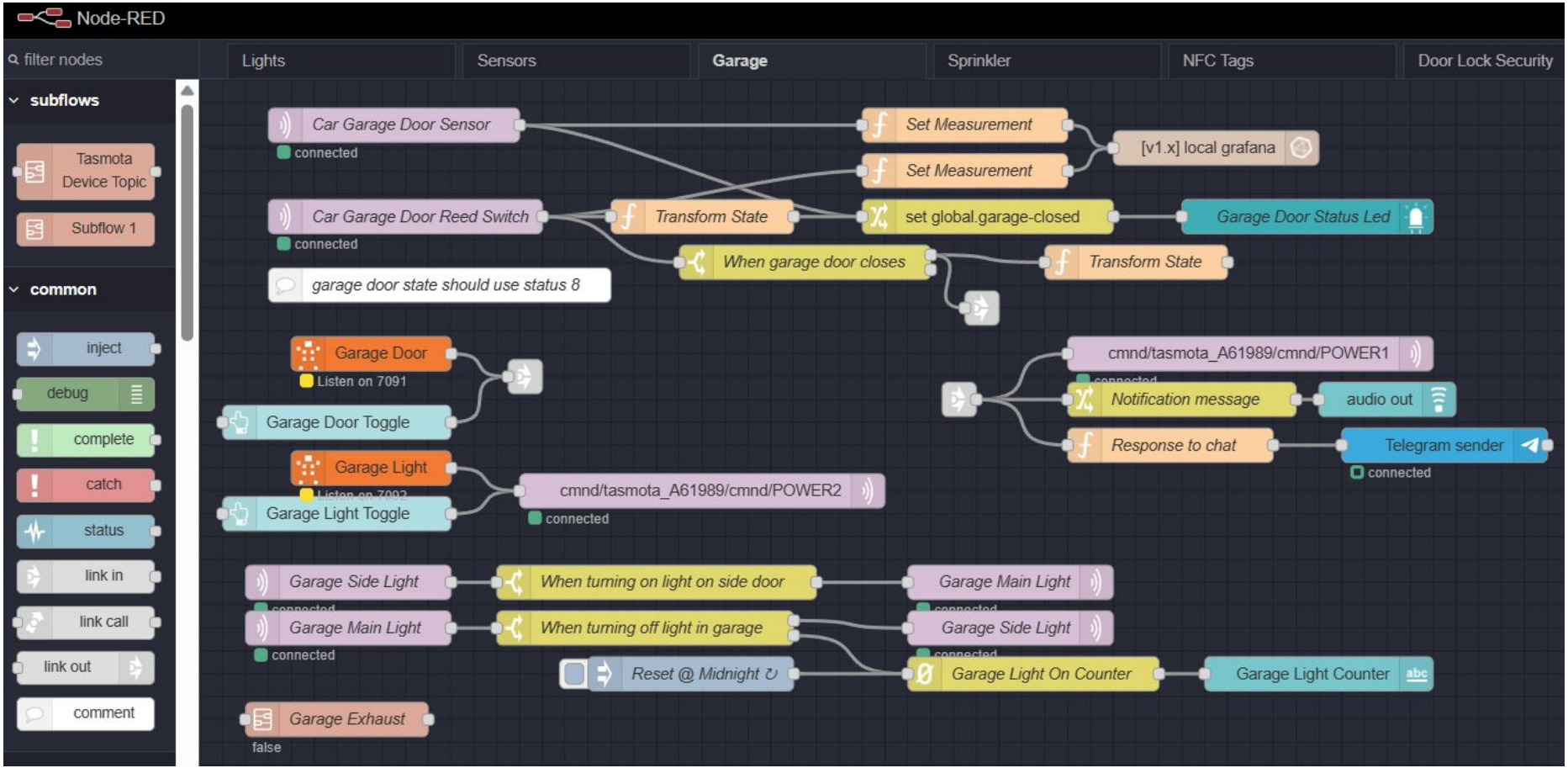

BOJACK
25VALUES 1000PCS
CARBON FILM RESISTOR KIT
1/4W ±5%
※ 1Ω 40PCS ±5% ※ 560Ω 40PCS ±5%
※ 2.2Ω 40PCS ±5% ※ 680Ω 40PCS ±5%
※ 3.3Ω 40PCS ±5% ※ 1KΩ 40PCS ±5%
※ 10Ω 40PCS ±5% ※ 2KΩ 40PCS ±5%
※ 22Ω 40PCS ±5% ※ 2.2KΩ 40PCS ±5%
※ 47Ω 40PCS ±5% ※ 4.7KΩ 40PCS ±5%
※ 68Ω 40PCS ±5% ※ 5.6KΩ 40PCS ±5%
※ 100Ω 40PCS ±5% ※ 10KΩ 40PCS ±5%
※ 120Ω 40PCS ±5% ※ 22KΩ 40PCS ±5%
※ 150Ω 40PCS ±5% ※ 47KΩ 40PCS ±5%
※ 220Ω 40PCS ±5% ※ 100KΩ 40PCS ±5%
※ 330Ω 40PCS ±5% ※ 1MΩ 40PCS ±5%
※ 470Ω 40PCS ±5%

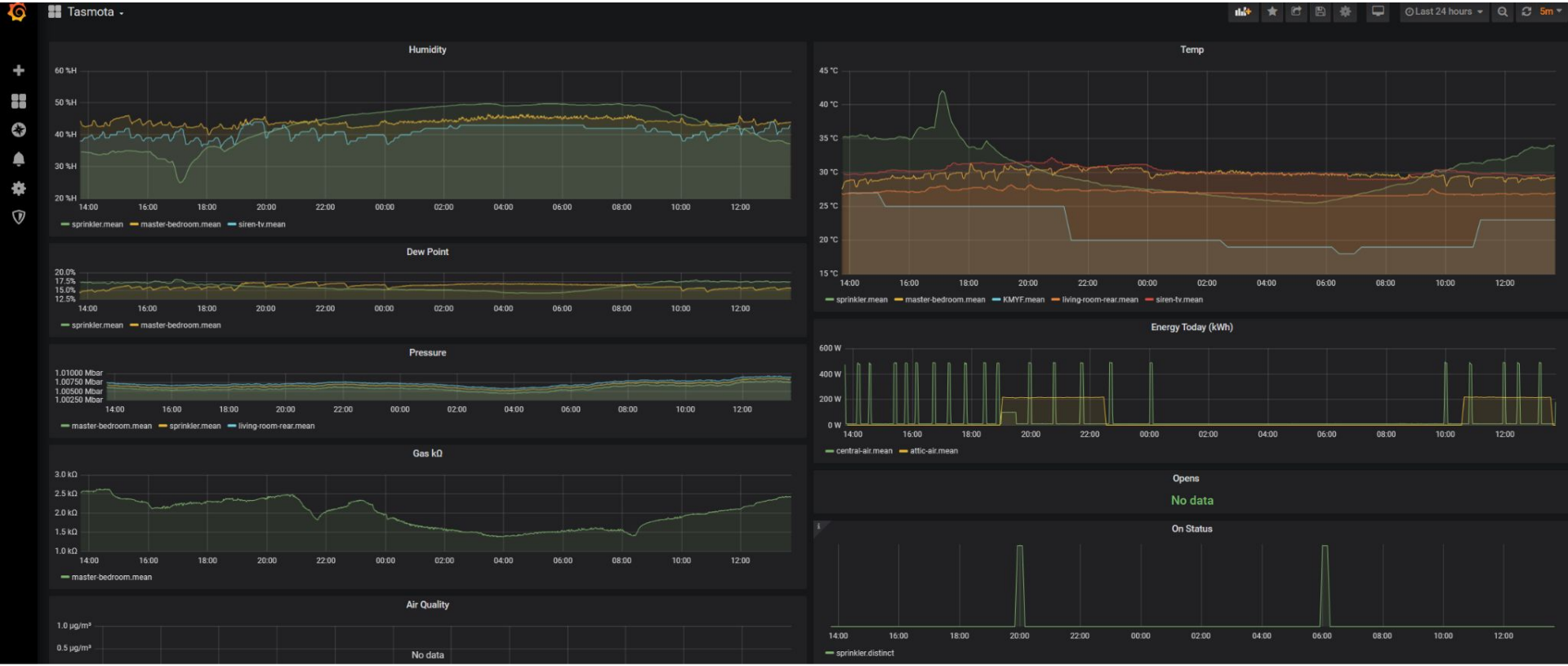

DIY WIRE AND CABLE
RED
BLACK
YELLOW
BLUE
ORANGE
PURPLE
GREEN
WHITE
MANY COLORS ARE AVAILABLE
DIY WIRE AND CABLE
GREEN
BLUE
YELLOW
BLACK
RED
WHITE


BOJACK
24VALUES 630PCS
ELECTROLYTIC CAPACITOR KIT
630
PIECES
0.1μF 50V 4×7 40pcs
0.22μF 50V 5×11 20pcs
0.47μF 50V 5×11 20pcs
1μF 50V 5×11 20pcs
2.2μF 50V 4×7 40pcs
3.3μF 50V 4×7 40pcs
4.7μF 50V 4×7 40pcs
10μF 25V 4×7 40pcs
10μF 50V 5×11 20pcs
22μF 16V 4×7 40pcs
22μF 25V 4×7 40pcs
33μF 16V 4×7 40pcs
47μF 10V 4×7 40pcs
47μF 25V 5×11 20pcs
47μF 50V 6×11 20pcs
100μF 16V 5×11 20pcs
100μF 25V 5×11 20pcs
220μF 10V 5×11 20pcs
220μF 25V 6×11 20pcs
330μF 25V 8×12 15pcs
470μF 10V 6×11 15pcs
470μF 16V 8×12 15pcs
680μF 16V 8×12 15pcs
1000μF 16V 10×16 10pcs

Software

- NodeRed
- Grafana
- Tasmota
- Telegram
- Python
- Javascript
- Vendor specific Apps


Node-RED
filter nodes
Lights
Sensors
Garage
Sprinkler
NFC Tags
Door Lock Security
subflows
Tasmota Device Topic
Subflow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
Car Garage Door Sensor
connected
Set Measurement
Set Measurement
[v1.x] local grafana
Car Garage Door Reed Switch
connected
Transform State
set global.garage-closed
Garage Door Status Led
When garage door closes
Transform State
garage door state should use status 8
Garage Door
Listen on 7091
Garage Door Toggle
cmnd/tasmota_A61989/cmnd/POWER1
connected
Notification message
audio out
Response to chat
Telegram sender
connected
Garage Light
Garage Light Toggle
cmnd/tasmota_A61989/cmnd/POWER2
connected
Garage Side Light
When turning on light on side door
Garage Main Light
Garage Main Light
When turning off light in garage
Garage Side Light
connected
Reset @ Midnight ↻
Garage Light On Counter
Garage Light Counter
Garage Exhaust
false


Tasmota
Last 24 hours
5m
Humidity
60 %H
50 %H
40 %H
30 %H
20 %H
14:00 16:00 18:00 20:00 22:00 00:00 02:00 04:00 06:00 08:00 10:00 12:00
sprinkler.mean
master-bedroom.mean
siren-tv.mean
Dew Point
20.0%
17.5%
15.0%
12.5%
14:00 16:00 18:00 20:00 22:00 00:00 02:00 04:00 06:00 08:00 10:00 12:00
sprinkler.mean
master-bedroom.mean
Pressure
1.01000 Mbar
1.00750 Mbar
1.00500 Mbar
1.00250 Mbar
14:00 16:00 18:00 20:00 22:00 00:00 02:00 04:00 06:00 08:00 10:00 12:00
master-bedroom.mean
sprinkler.mean
living-room-rear.mean
Gas kΩ
3.0 kΩ
2.5 kΩ
2.0 kΩ
1.5 kΩ
1.0 kΩ
14:00 16:00 18:00 20:00 22:00 00:00 02:00 04:00 06:00 08:00 10:00 12:00
master-bedroom.mean
Air Quality
1.0 µg/m³
0.5 µg/m³
No data
Temp
45 °C
40 °C
35 °C
30 °C
25 °C
20 °C
15 °C
14:00 16:00 18:00 20:00 22:00 00:00 02:00 04:00 06:00 08:00 10:00 12:00
sprinkler.mean
master-bedroom.mean
KMYF.mean
living-room-rear.mean
siren-tv.mean
Energy Today (kWh)
600 W
400 W
200 W
0 W
14:00 16:00 18:00 20:00 22:00 00:00 02:00 04:00 06:00 08:00 10:00 12:00
central-air.mean
attic-air.mean
Opens
No data
On Status
14:00 16:00 18:00 20:00 22:00 00:00 02:00 04:00 06:00 08:00 10:00 12:00
sprinkler.distinct

UX

Home

Status

Garage Door Closed

Weather

75F 69%

Door Lock

63

power

0 100

Front Door

69

power

0 100

Vacancy Mode Normal

GARAGE DOOR TOGGLE

UNLOCK SIDE

TOGGLE LOCK FRONT

ALL LIGHTS OFF

ALL LIGHTS ON

Tv Backlight Brightness 62

Room Brightness 26

Coffe Bar Color

Cold to Warm

Backyard Light

Entrance Light

Master Light

Garage Main Light

Garage Side Light

Porch Light

Attic Fan

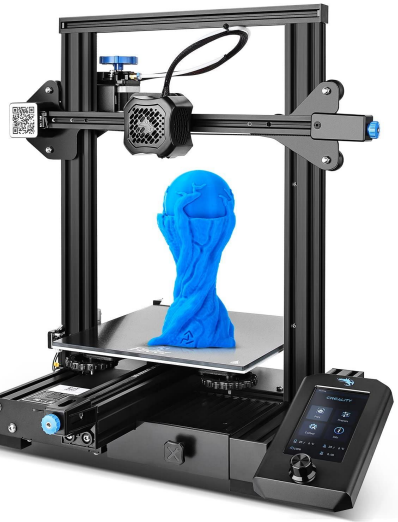
Garage Exhaust





Tools






KAIWEETS
2000 Counts
KM100
DIGITAL MULTIMETER
OFF
10A
COM
VΩmA
KAIWEETS


STREBITO

Questions?
Feedback!